



**THEME [CIP-ICT-PSP.2012.2.1]  
[Europeana and creativity]**

Grant agreement for: CIP-Best Practice Network

**Annex I - "Description of Work"**

Project acronym: eCloud

Project full title: " Europeana Cloud: Unlocking Europe's Research via The Cloud "

Grant agreement no: 325091

Version date: 2015-02-17

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# A1: Project summary

Project Number <sup>1</sup>	325091	Project Acronym <sup>2</sup>	eCloud
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One form per project

## General information

Project title <sup>3</sup>	Europeana Cloud: Unlocking Europe's Research via The Cloud		
Starting date <sup>4</sup>	01/02/2013		
Duration in months <sup>5</sup>	36		
Call (part) identifier <sup>6</sup>	CIP-ICT-PSP-2012-6		
Objective most relevant to your topic <sup>7</sup>	CIP-ICT-PSP.2012.2.1: Europeana and creativity		

## Abstract <sup>9</sup>

Europeana Cloud is a Best Practice Network, submitted under Objective 2.1.a and coordinated by the Europeana Foundation, designed to establish a cloud-based system for Europeana and its aggregators. Europeana Cloud will provide new content, new metadata, a new linked storage system, new tools and services for researchers and a new platform - Europeana Research. Content providers and aggregators, across the European information landscape, urgently need a cheaper, more sustainable infrastructure that is capable of storing both metadata and content. Researchers require a digital space where they can undertake innovative exploration and analysis of Europe's digitised content. Europeana needs to get closer to the target of 30 million items by 2015. Europeana Cloud meets these needs.

The key objectives of Europeana Cloud are: 1. To provide access, at Europeana, to 1.1m new metadata records and 5m research focussed items from across European Universities, libraries, data centres and publishers; 2. To create a cloud based infrastructure capable of delivering cost-efficient content and metadata storage for stakeholders across Europe; 3. To understand and incorporate the legal, strategic and economic issues of a cloud-based system for content for cultural heritage institutions and domain aggregators; 4. To achieve a broad consensus among European content aggregators and research networks on the advantages of a cloud based solution; 5. To develop a digital platform, named Europeana Research, to discover and use Europeana research content; 6. Via this cloud to provide tools and services for researchers that permit innovative research that exploits digitised content in Europeana. This is a vital project for the Europeana network of content providers and aggregators, moving to an infrastructure that can deal not just with descriptive metadata but actual digitised content as well.

# A2: List of Beneficiaries

Project Number <sup>1</sup>	325091	Project Acronym <sup>2</sup>	eCloud
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## List of Beneficiaries

No	Name	Short name	Country	Project entry month <sup>10</sup>	Project exit month
-16	CINECITTA' LUCE SPA	LUCE	Italy	1	7
1	STICHTING EUROPEANA	EF	Netherlands	1	36
2	ARIADNE FOUNDATION VZW	ARIADNE	Belgium	1	36
3	ATHENA RESEARCH AND INNOVATION CENTER IN INFORMATION COMMUNICATION & KNOWLEDGE TECHNOLOGIES	Athena RC	Greece	1	36
4	BAYERISCHE STAATSBIBLIOTHEK	BSB	Germany	1	36
5	QUESTA.SOFT - GESELLSCHAFT FUR SOFTWARE-ENTWICKLUNG MBH	CEEOL	Germany	1	36
6	Consortium of European Research Libraries	CERL	United Kingdom	1	36
7	CONSIGLIO NAZIONALE DELLE RICERCHE	CNR	Italy	1	36
8	DEBRECENI EGYETEM	DE	Hungary	1	36
9	FUNDACIÓN DIALNET	DIALNET	Spain	1	36
10	HRVATSKA AKADEMIJA ZNANOSTI I UMJETNOSTI	HAZU	Croatia	1	36
11	DET KONGELIGE BIBLIOTEK, NATIONALBIBLIOTEK OG KOBENHAVNS UNIVERSITETSBIBLIOTEK	KB DK	Denmark	1	36
12	STICHTING NEDERLAND KENNISLAND	KL	Netherlands	1	36
13	KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN - KNAW	KNAW	Netherlands	1	36
14	KATHOLIEKE UNIVERSITEIT LEUVEN	KU LEUVEN	Belgium	1	36
15	STICHTING LIBER	LIBER	Netherlands	1	36
16	ISTITUTO LUCE-CINECITTA SRL	LUCE	Italy	7	36
17	MDR PARTNERS (CONSULTING) LIMITED	MDR	United Kingdom	1	15
18	KANSALLISARKISTO	NAF	Finland	1	36
19	LLYFRGELLGENEDLAETHOL CYMRU	NLW	United Kingdom	1	36

# A2:

## List of Beneficiaries

No	Name	Short name	Country	Project entry month <sup>10</sup>	Project exit month
20	NARODNI TECHNICKA KNIHOVNA	NTK	Czech Republic	1	36
21	STICHTING OAPEN*OPEN ACCESS PUBLISHING IN EUROPEAN NETWORKS	OAPEN	Netherlands	1	36
22	Open Knowledge Foundation Deutschland	OKF DE	Germany	1	36
23	THE OPEN UNIVERSITY	OU	United Kingdom	1	36
24	INSTYTUT CHEMII BIOORGANICZNEJ POLSKIEJ AKADEMII NAUK	PSNC	Poland	1	36
25	THE PROVOST, FELLOWS, FOUNDATION SCHOLARS & THE OTHER MEMBERS OF BOARD OF THE COLLEGE OF THE HOLY & UNDIVIDED TRINITY OF QUEEN ELIZABETH NEAR DUBLIN	TCD	Ireland	1	36
26	STICHTING KATHOLIEKE UNIVERSITEIT BRABANT UNIVERSITEIT VAN TILBURG	TILBURA	Netherlands	1	36
27	UNIVERSITY COLLEGE LONDON	UCL	United Kingdom	1	36
28	THE UNIVERSITY OF EDINBURGH	UEDIN	United Kingdom	1	36
29	GOETEBORGS UNIVERSITET	UGOT	Sweden	1	36
30	UNIVERSITE LIBRE DE BRUXELLES	ULB	Belgium	1	36
31	UNIVERSITAET BIELEFELD	UNIBI	Germany	1	36
32	UNIVERSITY OF PATRAS	UPAT	Greece	1	36
33	STICHTING VU-VUMC	VUA	Netherlands	1	36
34	ELS JACOBS ADVIES & ONDERZOEK	Els JACOBS Advies (EJA)	Netherlands	21	36
35	Semantika proizvodnja, trgovina in racunalniske storitve d.o.o	SEM	Slovenia	22	36

# A3: Budget breakdown

Project Number <sup>1</sup>	325091	Project Acronym <sup>2</sup>	eCloud
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One Form per Project

Participant number in this project	Participant short name	Personnel costs	Sub contracting	Other direct costs	Total costs	Max EU Contribution	Requested EU contribution
-16	LUCE	0.00	0.00	0.00	0.00	0.00	0.00
1	EF	880,268.00	30,000.00	176,618.00	1,086,886.00	869,508.00	869,508.00
2	ARIADNE	90,000.00	0.00	3,000.00	93,000.00	74,400.00	74,400.00
3	Athena RC	171,000.00	0.00	19,500.00	190,500.00	152,400.00	152,400.00
4	BSB	37,800.00	0.00	4,500.00	42,300.00	33,840.00	33,840.00
5	CEEOL	30,000.00	0.00	4,500.00	34,500.00	27,600.00	27,600.00
6	CERL	162,500.00	16,240.00	12,000.00	190,740.00	152,592.00	152,592.00
7	CNR	198,000.00	0.00	5,250.00	203,250.00	162,600.00	162,600.00
8	DE	12,000.00	0.00	4,500.00	16,500.00	13,200.00	13,200.00
9	DIALNET	33,600.00	0.00	6,000.00	39,600.00	31,680.00	31,680.00
10	HAZU	42,858.00	0.00	4,500.00	47,358.00	37,886.00	37,886.00
11	KB DK	42,000.00	0.00	4,500.00	46,500.00	37,200.00	37,200.00
12	KL	184,600.00	0.00	11,250.00	195,850.00	156,680.00	156,680.00
13	KNAW	120,000.00	0.00	26,500.00	146,500.00	117,200.00	117,200.00
14	KU LEUVEN	200,000.00	0.00	9,000.00	209,000.00	167,200.00	167,200.00
15	LIBER	78,000.00	0.00	6,000.00	84,000.00	67,200.00	67,200.00
16	LUCE	30,000.00	0.00	3,000.00	33,000.00	26,400.00	26,400.00
17	MDR	195,495.00	0.00	3,680.00	199,175.00	159,340.00	159,340.00
18	NAF	15,300.00	0.00	3,000.00	18,300.00	14,640.00	14,640.00
19	NLW	147,987.00	0.00	4,500.00	152,487.00	121,989.00	121,989.00
20	NTK	11,256.00	0.00	4,500.00	15,756.00	12,604.00	12,604.00
21	OAPEN	40,632.00	0.00	4,500.00	45,132.00	36,105.00	36,105.00

# A3: Budget breakdown

Participant number in this project	Participant short name	Personnel costs	Sub contracting	Other direct costs	Total costs	Max EU Contribution	Requested EU contribution
22	OKF DE	156,400.00	0.00	4,500.00	160,900.00	128,720.00	128,720.00
23	OU	276,650.00	0.00	6,750.00	283,400.00	226,720.00	226,720.00
24	PSNC	286,700.00	0.00	25,250.00	311,950.00	249,560.00	249,560.00
25	TCD	117,544.00	0.00	12,000.00	129,544.00	103,635.00	103,635.00
26	TILBURA	45,000.00	0.00	4,500.00	49,500.00	39,600.00	39,600.00
27	UCL	163,557.00	0.00	12,000.00	175,557.00	140,445.00	140,445.00
28	UEDIN	55,499.00	0.00	4,500.00	59,999.00	47,999.00	47,999.00
29	UGOT	155,904.00	0.00	14,250.00	170,154.00	136,123.00	136,123.00
30	ULB	51,277.00	0.00	4,500.00	55,777.00	44,621.00	44,621.00
31	UNIBI	40,000.00	0.00	6,000.00	46,000.00	36,800.00	36,800.00
32	UPAT	12,000.00	0.00	4,500.00	16,500.00	13,200.00	13,200.00
33	VUA	61,468.00	0.00	4,500.00	65,968.00	52,774.00	52,774.00
34	Els JACOBS Advies (EJA)	95,200.00	0.00	4,000.00	99,200.00	79,360.00	79,360.00
35	SEM	33,300.00	0.00	1,500.00	34,800.00	27,840.00	27,840.00
<b>TOTAL</b>		<b>4,273,795.00</b>	<b>46,240.00</b>	<b>429,548.00</b>	<b>4,749,583.00</b>	<b>3,799,661.00</b>	<b>3,799,661.00</b>

### **1. Project number**

The project number has been assigned by the Commission as the unique identifier for your project, and it cannot be changed. The project number **should appear on each page of the grant agreement preparation documents** to prevent errors during its handling.

### **2. Project acronym**

Use the project acronym as indicated in the submitted proposal. It cannot be changed, unless agreed during the negotiations. The same acronym **should appear on each page of the grant agreement preparation documents** to prevent errors during its handling.

### **3. Project title**

Use the title (preferably no longer than 200 characters) as indicated in the submitted proposal. Minor corrections are possible if agreed during the preparation of the grant agreement.

### **4. Starting date**

Unless a specific (fixed) starting date is duly justified and agreed upon during the preparation of the Grant Agreement, the project will start on the first day of the month following the entry into force of the Grant Agreement (NB : entry into force = signature by the Commission). Please note that if a fixed starting date is used, you will be required to provide a detailed justification on a separate note.

### **5. Duration**

Insert the duration of the project in full months.

### **6. Call (part) identifier**

The Call (part) identifier is the reference number given in the call or part of the call you were addressing, as indicated in the publication of the call in the Official Journal of the European Union. You have to use the identifier given by the Commission in the letter inviting to prepare the grant agreement.

### **7. Activity code**

Select the activity code from the drop-down menu.

### **8. Free keywords**

Use the free keywords from your original proposal; changes and additions are possible.

### **9. Abstract**

**10. The month at which the participant joined the consortium, month 1 marking the start date of the project, and all other start dates being relative to this start date.**

**11. The number allocated by the Consortium to the participant for this project.**



# Workplan Tables

Project number

325091

Project title

eCloud—Europeana Cloud: Unlocking Europe's Research via The Cloud

Call (part) identifier

CIP-ICT-PSP-2012-6

Funding scheme

CIP-Best Practice Network



# WT1

## List of work packages

Project Number <sup>1</sup>	325091	Project Acronym <sup>2</sup>	eCloud
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### LIST OF WORK PACKAGES (WP)

WP Number <sup>53</sup>	WP Title	Lead beneficiary number <sup>55</sup>	Person-months <sup>56</sup>	Start month <sup>57</sup>	End month <sup>58</sup>
WP 1	Assessing Researcher Needs in the Cloud and Ensuring Community Engagement	3	105.00	1	36
WP 2	Developing the Infrastructure for Europeana Cloud	1	181.00	1	36
WP 3	Exploiting Europeana Cloud with services and tools for researchers	14	79.00	1	36
WP 4	Ingestion of Content and Metadata Development	6	107.00	1	36
WP 5	Sustaining the Europeana Cloud: Legal, Strategic and Economic Issues	1	102.33	1	36
WP 6	Dissemination and Networking	27	69.00	1	36
WP 7	Project Management	34	68.25	1	36
<b>Total</b>			<b>711.58</b>		

# WT2: List of Deliverables

Project Number <sup>1</sup>	325091	Project Acronym <sup>2</sup>	eCloud
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## List of Deliverables - to be submitted for review to EC

Deliverable Number <sup>61</sup>	Deliverable Title	WP number <sup>53</sup>	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D1.1	Research communities identification and definition report	1	13	12.00	R	PU	6
D1.2	State of the art report on digital research practices, tools and scholarly content use	1	6	13.00	R	PU	9
D1.3	User requirements analysis and case studies report	1	3	14.00	R	PU	30
D1.4	Content priorities for Humanities and Social Sciences research communities	1	25	14.00	R	PU	24
D1.5	Expert Forums with Reports	1	25	24.00	R	PU	30
D1.6	Content Strategy Report	1	6	14.00	R	PU	36
D1.7	Research Community Evaluation Report	1	3	12.00	R	PU	36
D2.1	Create Development Environment	2	1	1.00	O	PP	3
D2.2	Initial Version of Architectural Design Document	2	24	9.00	R	PP	6
D2.3	Prototype of Metadata Cloud	2	1	57.00	P	PU	12
D2.4	Prototype of Content Cloud	2	1	18.00	P	PU	18
D2.5	Prototype of Metadata	2	1	57.00	P	PU	24

# WT2: List of Deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	WP number <sup>53</sup>	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
	Cloud and Core Services						
D2.6	Metadata and Content Cloud Delivered	2	1	18.00	P	PU	30
D2.7	Migration/Upload of metadata and content analyzed	2	1	9.00	P	PU	36
D3.1	Document on personas, scenarios and use cases	3	14	15.00	R	PU	30
D3.2	Tools and services	3	14	39.00	P	PU	30
D3.3	Evaluation report	3	1	4.00	R	PU	36
D3.4	Europeana Research Portal	3	1	12.00	D	PU	36
D4.1	Initial Metadata Ingestion Plan	4	1	6.00	R	PU	4
D4.2	Content Ingestion Plan	4	1	6.00	R	PU	24
D4.3	A report and a plan on future directions for improving metadata in the Europeana Cloud	4	6	9.00	R	PU	36
D4.4	Recommendation for enhancing EDM to support research-orientated content	4	6	10.00	R	PU	30
D4.5	Research metadata and content available in the Europeana Cloud	4	1	73.00	O	PU	36
D5.1	Minimum requirements for the cloud	5	1	10.00	R	PU	10
D5.2	Handbook for the Europeana	5	1	26.00	R	PU	28

# WT2: List of Deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	WP number <sup>53</sup>	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
	Cloud participants						
D5.3	Revised Europeana Licensing Framework	5	12	20.00	R	PU	28
D5.4	Model and Governance Structure for Europeana Cloud	5	1	10.00	R	PU	28
D5.5	Europeana Cloud Partner Roadmap	5	1	10.00	R	PU	29
D5.6	Europeana Cloud Business Model	5	1	10.00	R	PU	23
D5.7	Product Requirements	5	1	6.00	R	PU	23
D6.1	Stakeholder Engagement & Infrastructure Plan	6	27	8.00	R	PU	6
D6.2	European Research Coordinators Group Plan	6	13	10.00	R	PU	7
D6.3	Researcher Communication Plan	6	3	21.00	R	PU	18
D6.4	Promoting the Europeana Cloud	6	1	30.00	R	PU	18
D7.1	Consortium Agreement	7	34	7.00	R	PP	26
D7.2	Periodic progress report	7	17	12.00	R	PU	6
D7.3	Annual report	7	17	12.00	R	PU	12
D7.4	Periodic progress report	7	1	12.00	R	PU	18
D7.5	Annual report	7	34	9.00	R	PU	24
D7.6	Periodic progress report	7	34	7.00	R	PU	30
D7.7	Final Report	7	34	9.00	R	PU	36

# WT2: List of Deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	WP number <sup>53</sup>	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
			Total	675.00			

# WT3: Work package description

Project Number <sup>1</sup>	325091	Project Acronym <sup>2</sup>	eCloud
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## One form per Work Package

Work package number <sup>53</sup>	WP1
Work package title	Assessing Researcher Needs in the Cloud and Ensuring Community Engagement
Start month	1
End month	36
Lead beneficiary number <sup>55</sup>	3

## Objectives

- To identify and define the Humanities and Social Sciences research communities that will be supported via the Europeana Cloud
- To develop an effective research content strategy for Europeana, based on an evidence-based account of usefulness of Europeana and The European Library resources for research in the Humanities and Social Sciences
- To improve the understanding of digital tools, research processes and content used in the Humanities and Social Sciences, thus informing the development of tools and aggregation of content in the Europeana Cloud
- To actively engage the Humanities and Social Sciences research communities in establishing user requirements for the development of Europeana Cloud

## Description of work and role of partners

Task 1.1 Humanities and Social Sciences Research Communities Advisory Board (Led by NIOD) [NIOD: 6PM, UGOT: 3PM, Athens RC: 3PM] [M1 - M36]

1.1.1 Establish the Research Communities Advisory Board [M1]

NIOD will establish the Research Communities Advisory Board following consultation with project partners. Milestone 1.1 [M1]

1.1.2 Research Communities Advisory Board coordination [M3 onward]

NIOD will coordinate the Research Communities Advisory Board, including organising physical meetings (2 times per year) and virtual meetings. The Board will guide the activities of the work package, validating the key deliverables. Milestone 1.5 [M12, 24, 36]

1.1.3 Research Communities identification and definition [M1-M6]

NIOD with UGOT and Athena RC will define and identify humanities and social science research communities to be supported via the Europeana Cloud, on the basis of desk research and in consultation with project partners. Deliverable 1.1 [M6]

Task 1.2 Developing a Content Strategy for Europeana Research (Led by CERL) [CERL: 6PM, Athens RC: 5PM, EF: 3 PM, UGOT: 2PM, LIBER: 2PM, UEDIN: 2PM] [M1 - M36]

1.2.1 Desk Research: state of the art on scholarly content use [M1-6]

Building on a survey of relevant user information behaviour (UIB) literature, Athena RC with CERL and UGOT will produce a state of the art report on the use of diverse kinds of information resources (quantitative datasets, primary sources, as well as publications and other kinds of scholarly resources) in the humanities and social sciences. The outcome of this work (Milestone 1.2 [M6]) will contribute to D1.2 [M9].

1.2.2 Matching Europeana content to the Research Communities [M3-M18]

Building on the outcome of T1.2.1 and previous content analysis work undertaken by Europeana and The European Library, this task led by CERL with Athena RC, UGOT, LIBER and UEDIN, will match the existing content in Europeana and The European Library to the Humanities and Social Sciences research communities



# WT3: Work package description

that are being defined in T1.1.3 and further elaborated as Case Studies in T1.3.5. In liaison with Research Communities Advisory Board, the gaps in the existing content will be identified. The evidence gathered in the web survey (T1.3.4) and the expert forums (#1- #3) (by M12) will also inform the ingestion of content from existing providers into Europeana during the course of the project in T4.2.

Deliverable 1.4 [M18]

## 1.2.3 Content Strategy Development [M18-36]

Based on the recommendations from T1.2.1 and T1.2.2, EF with CERL, UGOT, LIBER, UEDIN and Athena RC will lead the development of a content strategy consulting with the Europeana Research Coordinators Group to be established in WP6 as appropriate. Deliverable 1.6 [M36]

Task 1.3 Research user requirements for Europeana: digital research practices, tools and content (Led by Athena RC) [Athena RC: 15 PM, NLW: 8PM, TCD: 4PM, UGOT: 4PM, NIOD: 2PM, EF:2PM] [M1 - 26]

### 1.3.1. Desk research: digital research practices state of the art [M1-8]

Athena RC with UGOT will undertake desk research to understand, document and evaluate the current state-of-the-art of digital research practices in the humanities and social sciences. The outcome of this work (Milestone 1.4 [M8]) will contribute to D1.2 [M9].

### 1.3.2. Desk research: digital tools state of the art [M1-M9, initial results by M6]

NLW with UGOT will identify, document and evaluate existing tools used by researchers in the humanities and social sciences. Deliverable 1.2 [M9]

### 1.3.3. Research community web survey design [M1-M4]

Athena RC with NLW, UGOT and NIOD will design a web survey to analyse digital research practices, tools and content to gather evidence-based data from the humanities and social sciences research community, focusing in particular on the potential use of content from Europeana and The European Library within Europeana Cloud.

### 1.3.4 Research Communities web survey [M5-M7]

Athena RC with NIOD will implement and carry out the web survey, by making it known to the mailing list of potential participants developed in T1.1.3. Milestone 1.3 [M7]

### 1.3.5 Identify and create Humanities and Social Sciences case studies [M8-M12]

TCD and UGOT will identify, study, document and analyse practical case studies of actual use of innovative digital tools and services, in the Humanities and Social Sciences respectively.

### 1.3.6 User requirements analysis and case studies report [M8-M12, M21, M30]

Athena RC will analyse the results of the web survey to produce a requirements analysis report which will inform the iterative development of tools in WP3. In turn, the results of the iterative development process will feedback into WP1. The user requirements document will be updated at the end of each iterative development cycle in WP3 at M21 and M30. EF will assist in the user person development in the context of Europeana Research. Deliverable 1.3 by [M12, M21, M30]

Task 1.4 Research Community Engagement: Expert Forums (Led by TCD) [TCD: 6PM, Athena RC: 4PM, NIOD: 4PM, NLW: 4PM, UGOT: 4PM, LIBER: 4PM] [M3 - M30] Deliverable 1.5 [M6, 10, 30]

### 1.4.1 Case Studies Expert Forum #1 [M6]

NIOD will organise an Expert Forum, involving selected WP1 member representatives and members of the Research Community Advisory Board, as well as external experts, which will examine background material, evaluate proposals and validate the development of Case Studies by T1.3.5. NIOD will produce a report of the discussion after the Forum Deliverable 1.5 [M6]

### 1.4.2 Tools & Content for Humanities Research: Expert Forum #2 [by M10]

TCD with the NLW and LIBER will organise an Expert Forum focusing on the tools and content for Humanities research. This expert forum, involving selected project members and external experts, will inform the iterative tools development in WP3 and the Content Strategy in Task 1.2. TCD will produce a report of the discussion after the Forum. Deliverable 1.5 [M10]

### 1.4.3 Tools & Content for Social Science Research Expert Forum #3 [by M10]

UGOT with the NLW and LIBER will organise an Expert Forum focusing on the tools and content for Social Sciences research. This expert forum, involving selected project members and external experts, will inform the

# WT3: Work package description

iterative tools development in WP3 and the Content Strategy in Task 1.2. UGOT will produce a report of the discussion after the Forum. Deliverable 1.5 [M10]

#### 1.4.4 Future Recommendations Workshop (Expert Forum #4) [M30]

DCU Athens RC will organise an Expert Forum involving selected WP1 member representatives and members of the Research Community Advisory Board, as well as external experts, to provide a broad review of the tools and content access and use services provided by Europeana Cloud, and to develop recommendations for future work, including how the engagement of researchers will continue beyond the lifetime of the project to ensure their future use and uptake of the Europeana Research platform. Athena RC will produce a report of the discussion after the Forum Deliverable 1.5 [M30]

Task 1.5 Research Community User Evaluation (Led by Athena RC) [Athena RC: 6PM, TCD: 2PM, NLW: 2PM, UGOT: 2PM] [M24 - M36]

#### 1.5.1 Evaluation Framework Design [M8-9]

Athena RC will design and NLW will review and provide input on, the methodological framework and define the research protocol for the formative and summative evaluation of user tools developed through the iterative prototyping process of WP3.

#### 1.5.2 Evaluation workshops [M10, M21, M30]

Athena RC will organise three evaluation workshops linked to WP3 iterative development cycle, involving T1.5 and WP3 partners, and intended to provide feedback regarding the usefulness (as against usability) of tools and service prototypes within Europeana Cloud, and their fitness-for-purpose with regard to the requirements analysis of T1.3.2: two formative evaluation workshops in M10 and M21, feeding into the user-centred design cycle in WP3, and one summative evaluation workshop in M30, validating the results of the project. Milestone 1.6 [M10, M21, M30]

#### 1.5.3 Analysis, write-up and reporting update [M10, M21, M30-36]

Athena RC with TCD, NLW and UGOT will analyse and write up the results of evaluation workshops. Deliverable 1.7 [M36]

### Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
1	EF	5.00
3	Athena RC	33.00
6	CERL	6.00
13	KNAW	12.00
15	LIBER	6.00
19	NLW	14.00
25	TCD	12.00
28	UEDIN	2.00
29	UGOT	15.00
	Total	105.00

# WT3: Work package description

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D1.1	Research communities identification and definition report	13	12.00	R	PU	6
D1.2	State of the art report on digital research practices, tools and scholarly content use	6	13.00	R	PU	9
D1.3	User requirements analysis and case studies report	3	14.00	R	PU	30
D1.4	Content priorities for Humanities and Social Sciences research communities	25	14.00	R	PU	24
D1.5	Expert Forums with Reports	25	24.00	R	PU	30
D1.6	Content Strategy Report	6	14.00	R	PU	36
D1.7	Research Community Evaluation Report	3	12.00	R	PU	36
<b>Total</b>			<b>103.00</b>			

## Description of deliverables

D1.1) Research communities identification and definition report: D1.1 will produce a thorough definition and identification of humanities and social science research communities to be supported via the Europeana Cloud. [month 6]

D1.2) State of the art report on digital research practices, tools and scholarly content use: A detailed report aiming to comprehend, document and assess the current state-of-the-art of digital scholarly research practices in the humanities and social sciences [month 9]

D1.3) User requirements analysis and case studies report: A web survey amenable to quantification, composed mostly of closed questions addressed to humanities and social sciences researchers. With case studies (M12,21,30) [month 30]

D1.4) Content priorities for Humanities and Social Sciences research communities: This deliverable will inform and prioritize the ingestion of content for humanities and social sciences communities from existing providers into Europeana. (Delivery date extended to M24) [month 24]

D1.5) Expert Forums with Reports: A series of four expert forums. Reports in M6, 10 and 30 [month 30]

D1.6) Content Strategy Report: A report on a content strategy for Europeana [month 36]

D1.7) Research Community Evaluation Report: This document will be an in-depth review and analysis of the results of the evaluation workshops [month 36]

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS1	Research Communities Advisory Board established	13	1	

# WT3: Work package description

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS2	Desk research on Scholarly Content use complete	6	6	
MS3	Web survey complete	3	7	
MS4	Desk research on Digital Research Practices complete	19	9	
MS5	Research Communities Advisory Board meetings complete	25	12	Also M24 and M36
MS6	Evaluation workshops and write-ups complete	3	10	Also M21 and M30

# WT3: Work package description

Project Number <sup>1</sup>	325091	Project Acronym <sup>2</sup>	eCloud
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## One form per Work Package

Work package number <sup>53</sup>	WP2
Work package title	Developing the Infrastructure for Europeana Cloud
Start month	1
End month	36
Lead beneficiary number <sup>55</sup>	1

## Objectives

- Analyse and define the foundations for a cloud based shared and trusted storage infrastructure for Europeana and Aggregators in consultation with the relevant stakeholders.
- Create a scalable cloud based storage system for metadata shared by the involved partners.
- Extend the cloud storage with content capability - analyze the scalability and requirements to grow the cloud with large amounts of multimedia content for research purposes. This will result in a prototype implementation.
- Extend the cloud storage with the capability to run services on the data in the cloud.
- Ensure that the cloud infrastructure meets requirements by undertaking an agile development / feedback loop not only technically within WP2 but also in understanding the requirements from other WPs, particularly WP5

## Description of work and role of partners

### Task 2.1 Requirements Gathering and Evaluation of Technologies [M1-30]

#### 2.1.1 Create and Iterate Architectural Design Document [M1-30]

Drawing on requirements from WP1 and WP5, Poznan will lead on creating the initial version of the Architectural Design Document, which will guide WP2 development work. [M1-6] Deliverable 2.2 [M6] This document will be iterated over the course of project [M7-30]

#### 2.1.2 Evaluation of available cloud technologies [M1-6]

To feed into the Architectural Design Document, OU will undertake an in depth evaluation of available cloud technologies for the underlying storage system; analyse the implications for performance, scalability and possible services [M1-6]

#### 2.1.3 Set up and configure the development environment [M1-3]

EF will set up and configure the development environment for all partners and relevant functionality to allow for a agile development of the scrum-based methodology [M1-3] Deliverable 2.1 [M3]

### 2.2 Prototype Development for Metadata Cloud [M7-30]

As part of an agile feedback loop with Task 2.4, EF will lead this task to develop the metadata cloud and its supporting services - an identifier system, an authentication system and a notification system.

### 2.3 Prototype Development for Content Cloud [M7-30]

Task 2.1, led by EF, will evaluate the impact of large content elements in the cloud; task 2.3 will implement the Architectural Design Document to make the metadata cloud content enabled.

#### 2.3.1 Integration of sample content documents into the cloud [M7-M12]

Integration of sample content documents into the cloud storage alongside with the implementation of the metadata cloud to support early developments in WP3.

#### 2.3.2 Adaptation of content cloud to meet performance and scalability requirements for large amounts of content [M12-30]

#### 2.3.3 Implementation of legal requirements from WP5 [M24-30]

# WT3: Work package description

Alongside the performance issues triggered by content items, the cloud infrastructure might need to develop specific proxy mechanism or similar to cope with legal facts related to digital content.

## 2.4 Bidirectional Metadata and Content Access API [M7-30]

To provide easy access to the data in the cloud to external services (such as those developed in WP3) the cloud needs to offer APIs for the addition or retrieval of elements. Poznan will further provide a basic user interface on top of the API to retrieve and look into the records in the cloud.

## 2.5 Service Platform and Execution API [M12-36]

A cloud based storage system implies the availability of some computational resources for performing basic operations on data. Besides leading on a programming API for the implementation of internal consistency services, ISTI-CNR will lead the development of programming API supporting other services which have to be executed on the cloud infrastructure.

## 2.6 Evaluations and Migration to Cloud [M31-36]

ISTI-CNR implements the feedback loop for Task 2.2 and Task 2.3, undertaking the evaluation from the development and to ensure objective results on the validation of scalability, performance and the implementation of legal issues identified in WP5. Reports will produced here Deliverables 2.3, 2.4, 2.5 and 2.6 [M12, 24, 30, 36] Europeana Foundation will lead exporting metadata from Europeana, The European Library and the Polish Digital Library Federation into the developed shared cloud infrastructure. ISTI-CNR will evaluate and validate the migration process [M31-36]

### Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
1	EF	64.00
7	CNR	24.00
23	OU	35.00
24	PSNC	58.00
Total		181.00

### List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D2.1	Create Development Environment	1	1.00	O	PP	3
D2.2	Initial Version of Architectural Design Document	24	9.00	R	PP	6
D2.3	Prototype of Metadata Cloud	1	57.00	P	PU	12
D2.4	Prototype of Content Cloud	1	18.00	P	PU	18
D2.5	Prototype of Metadata Cloud and Core Services	1	57.00	P	PU	24
D2.6	Metadata and Content Cloud Delivered	1	18.00	P	PU	30
D2.7	Migration/Upload of metadata and content analyzed	1	9.00	P	PU	36

# WT3: Work package description

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
			Total	169.00		

## Description of deliverables

- D2.1) Create Development Environment: Create Development Environment and Agile/Scrum Infrastructure [month 3]
- D2.2) Initial Version of Architectural Design Document: Initial version of the Architectural Design Document [month 6]
- D2.3) Prototype of Metadata Cloud: Prototype of Metadata Cloud With Identifier Service delivered; accompanied by evaluation report to inform iterations of Architectural Design Document [month 12]
- D2.4) Prototype of Content Cloud: Prototype of Content Cloud delivered; accompanied by evaluation report to inform iterations of Architectural Design Document [month 18]
- D2.5) Prototype of Metadata Cloud and Core Services: Prototype of the Metadata Cloud and Core Services delivered; accompanied by evaluation report to inform iterations of Architectural Design Document [month 24]
- D2.6) Metadata and Content Cloud Delivered: Metadata and Content Cloud Delivered - Functional Release v1.0; associated report on the Evaluations of the Metadata and Content Cloud Performance [month 30]
- D2.7) Migration/Upload of metadata and content analyzed: Migration/Upload of all metadata to the cloud based storage and aggregation infrastructure of involved institutions completed, with associated scalability report [month 36]

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS7	Decision on the use of underlying cloud storage system	23	6	
MS8	First Prototype made available to other WPs - implementation with multiple nodes, sites and more tha	1	8	
MS9	Content and metadata loaded and accessible through test API from prototype.	1	9	
MS10	Second Prototype made available to other WPs – improvements on stability and performance	1	18	
MS11	Content and metadata loaded and accessible through Beta API from prototype	1	18	
MS12	Performance evaluation on improvements and limitations.	1	18	
MS13	25% of available metadata available in cloud	1	30	

# WT3: Work package description

Project Number <sup>1</sup>	325091	Project Acronym <sup>2</sup>	eCloud
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## One form per Work Package

Work package number <sup>53</sup>	WP3
Work package title	Exploiting Europeana Cloud with services and tools for researchers
Start month	1
End month	36
Lead beneficiary number <sup>55</sup>	14

## Objectives

- Development of services and tools that leverage Europeana content for use by researchers
- Follow an iterative design process to identify typical personas and scenarios of thematic use of content that the Europeana Cloud tools and services as well as the Europeana Research Platform would be expected to support
- Develop a semantic layer over Europeana Cloud as well as the corresponding search endpoint and relevant APIs that will facilitate unified access into the aggregated Europeana metadata and content
- Develop further the concept, services and showcases of the Europeana Research Platform, boosted by the developed infrastructure, APIs, and demonstration services
- Reporting on the success, potential, and challenges related to the integration of new research-oriented services and tools with the Europeana Cloud infrastructure

## Description of work and role of partners

### Task 3.1 Personas, Scenarios and Use Cases [M1-6,M12-18,M24-30]

In close alignment with the tasks in WP1 on user needs and existing tools, KU Leuven will lead on developing personas (descriptions of typical researchers that we address with this project), scenarios and use cases that describe in detail what kind of tool a researcher would typically use, and how that use would fit in his typical workflow. This will result in Deliverable 3.1 [M6, M18, M30]

### Task 3.2 Iterative design, development and evaluation of tools [M1-36]

Four of the WP partners will build upon 3.1 in order to adapt existing or develop new service/tool demonstrators that can illustrate how Europeana content will be put in use. It will assist WP1, offering the necessary materials, guidelines and facilitation support in order to help them organize iterative design workshops/sessions on envisaged services and tools. It will also feed into WP4 giving, guidance on the related metadata requirements.

#### 3.2.1 Initial brainstorming and scenario building [M1-3, M12-15, M24-27]

#### 3.2.2 Paper prototypes to gather initial feedback on early ideas [M3-6, M15-18, M27-30]

#### 3.2.3 Gradual development of more functional digital prototypes in rapid iteration cycles [M6-9,M18-M21,M30-M33]

#### 3.2.4 Deployment of final implementations in realistic testbeds [M9-12, M21-24, M33-36]. Deliverable 3.2 available at M12, 24 and 36

#### 3.2.5 Evaluation of technical integration of tools with Europeana Content [M9-12, M21-24, M33-36] Deliverable 3.3 available at M12, 24 and 36

### Task 3.3. Further development of the Europeana Research Portal [M25-36]

#### 3.3.1 Develop Plan for Europeana Research Platform [M25-30]

EF will plan the further development of the Europeana Research Platform which will be developed based on the user feedback from the groups and export fora in WP1. Semantika will also be involved.

#### 3.3.2 Establish Evolved Version of Europeana Research Platform [M31-36]



# WT3: Work package description

Evolving from the existing interface for the domain aggregator for libraries, The European Library, the Europeana Research Platform, will be developed by EF and be fully interoperable with the tools developed in WP 3.1 Deliverable 3.4 available at M36. A prototype version will be available by M24. Semantika will also be involved.

## Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
1	EF	13.00
2	ARIADNE	12.00
14	KU LEUVEN	24.00
22	OKF DE	16.00
33	VUA	5.00
35	SEM	9.00
Total		79.00

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D3.1	Document on personas, scenarios and use cases	14	15.00	R	PU	30
D3.2	Tools and services	14	39.00	P	PU	30
D3.3	Evaluation report	1	4.00	R	PU	36
D3.4	Europeana Research Portal	1	12.00	D	PU	36
Total			70.00			

## Description of deliverables

D3.1) Document on personas, scenarios and use cases: Updated document outlining personas, scenarios and use cases related to Europeana Research tools [M6, M18, M30] [month 30]

D3.2) Tools and services: A set of tools and services for researchers that exploit Europeana content [M12, M21, M30] [month 30]

D3.3) Evaluation report: Evaluation report on integration of tools with Europeana [M12,M24,M36] [month 36]

D3.4) Europeana Research Portal: The evolved Europeana Research portal [M36] [month 36]

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS14	First version of tools and documentation	14	12	
MS15	Second version of tools and documentation	14	24	

# WT3: Work package description

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS16	Third version of tools and documentation	14	36	
MS17	Europeana research Portal	1	36	

# WT3: Work package description

Project Number <sup>1</sup>	325091	Project Acronym <sup>2</sup>	eCloud
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## One form per Work Package

Work package number <sup>53</sup>	WP4
Work package title	Ingestion of Content and Metadata Development
Start month	1
End month	36
Lead beneficiary number <sup>55</sup>	6

## Objectives

- Bring new metadata and content from new and existing partners into Europeana
- Make recommendations to enhance the EDM model, to support the use and reuse of data by researchers
- Explore the improvement of discoverability of the content by connecting to external data sources through relevant datasets available as Linked Open Data.
- Exploring the relationship between data in the Europeana Cloud to improve the contextualisation of the object

## Description of work and role of partners

### Task 4.1 Ingestion of Metadata into Europeana [M1-30]

#### 4.1.1 Create and Update Metadata Ingestion Plan [M1-30]

EF, working with all project partners that provide metadata, will draw up a plan and timetable to ingest metadata into Europeana. The ingestion plan will be reviewed every six months Deliverable 4.1 - Initial Ingestion Plan [M4] and updates Milestone 4.1 [M12, M18, M24, M30 and M36]. The result will be that 2.4 million metadata records from project partners are available in Europeana Milestone 4.2

#### 4.1.2 Organise Metadata Ingestion Clinics [M6-24]

CERL and EF will host metadata ingestion clinics [1st in M6 for all project partners; further clinics to be aligned with other project meetings, in or around M12, M18, M24] to help the new and current data providers prepare their metadata and their content for ingestion. Milestone 4.5

### Task 4.2 Ingestion of Content for Research directly into the Cloud [M12-36]

#### 4.2.1 Ingest Sample Content into Cloud [M12-18]

Using the first prototype of Task 2.2 and Task 2.4, a sample amount of content will be ingested into the Europeana Cloud. This trial content will be made available from existing stores at Europeana, The European Library, OU and Poznan. Milestone 4.6 [M18]

#### 4.2.2 Building Additional Tools for Content Ingestion [M18-24]

EF will add and develop its existing suite of tools, thus allowing for the exchange and preparation of content to be made available in the Europeana Cloud.

#### 4.2.3 Approaching Europeana Network for Content [M18-24]

Based on the Content Strategy developed in WP1 and the Content Table 0.b, CERL and EF will approach existing metadata providers to Europeana to provide content for Europeana Cloud.

#### 4.2.4 Create and Update Content Ingestion Plan [M24-36]

EF, working with both new and existing content providers, will construct a plan and timetable to ingest new content into Europeana. This second ingestion plan (consolidated with the metadata ingestion plan) will be reviewed and updated every six months, incorporating feedback from WP1.2 regarding user requirements. Deliverable 4.2 - Initial Plan [M24] and updates Milestone 4.3 [M30 and M36].

#### 4.2.5 Execute Content Ingestion Plan [M24-36]

# WT3: Work package description

CERL and EF will work with new and existing content partners to execute the content ingestion plan, in accordance with quality controls and data standards to ensure machine readable, interoperable outputs. Resulting in Deliverable 4.5 [M36]

#### 4.2.6 Refine Content Ingestion Process [M30-36]

CERL and EF together with Task 2.4 will work on a continuous evaluation of the content ingestion process directly into the Europeana Cloud. The task will validate the functionality with focus on the evaluation and quality assurance steps necessary when ingesting content and update the process accordingly.

#### Task 4.3 Connecting Research Material in the Cloud: Exploring Shared Metadata Enrichment [M6-36]

##### 4.3.1 Enrichment of metadata (ISTI-CNR) [M24-36]

ISTI-CNR will mine external databases for events with the aim to enrich the Europeana metadata by identifying specific events that are cited within EDM-compliant metadata. The outcome will be additional enrichment plugins in UIM to enrich Cloud data as part of the content ingestion workflow. Milestone 4.8 [M36]

##### 4.3.2 Improve metadata based on content available in the Cloud. [M24-36]

OU will compare and implement different models for connecting content based on semantic similarity of full text or metadata. Selected methods will be provided as a service for the Cloud. The outcome will be additional plugins in UIM to enrich Cloud metadata as part of the content ingestion workflow [M36]. Milestone 4.9

##### 4.3.3 Establish Pilots for editing of data in the Cloud [M24-36]

###### a. manual editing

Together with CERL, EF will set up a pilot for manual data curation of subsets of metadata or specific aspects of metadata and explore its impact on the Europeana Research platform. E.g. a curator might want to edit a single metadata record or replace a specific value in the metadata with a controlled term.

###### b. batch editing

Together with CERL, EF will set up a pilot for editing of batches of records executed by an expert organisation that does not hold data in the cloud, and will explore its impact on the Europeana Research platform. The outcomes of the pilots will be included in Deliverable D4.3 [M36]

##### 4.3.4 Evaluate Metadata Enrichment methods and processes [M30-36]

The various methods of metadata improvement and editing will be evaluated – also taking into account the user needs identified in Task 1.2 and the outcomes of WP3. CERL, EF, OU and ISTI-CNR will produce a report and a plan on future directions for continuing to improve metadata in the Europeana Cloud. Deliverable 4.3 [M36]

#### Task 4.4 Evolving the Europeana Data Model for research content [M5-36]

The Europeana Foundation will establish a Europeana Cloud Metadata Working Group.

##### 4.4.1 Recommendations for EDM [M5-30]

The Metadata Working Group will review EDM against the user needs identified in Task 1.2, the variety of content that will be placed in the Europeana Cloud (Task 4.2), and requirements that may emerge from the metadata enhancements in Task 4.3 and the tools developed in WP3. The aim is to ensure that EDM supports searching and reuse of data and content by researchers. The recommendations for EDM will be reviewed by The Europeana Foundation as part of their standard procedures for evolving EDM. Deliverable 4.4 [M30], first draft of the report Milestone M4.4 [M22]

#### Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
1	EF	17.00
4	BSB	3.00
5	CEEOL	3.00
6	CERL	12.00
7	CNR	6.00

# WT3: Work package description

## Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
8	DE	3.00
9	DIALNET	3.00
10	HAZU	9.00
11	KB DK	3.00
14	KU LEUVEN	3.00
16	LUCE	3.00
18	NAF	0.00
19	NLW	3.00
20	NTK	3.00
21	OAPEN	3.00
23	OU	12.00
26	TILBURA	3.00
27	UCL	3.00
28	UEDIN	3.00
29	UGOT	1.00
30	ULB	2.00
31	UNIBI	3.00
32	UPAT	3.00
33	VUA	3.00
Total		107.00

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D4.1	Initial Metadata Ingestion Plan	1	6.00	R	PU	4
D4.2	Content Ingestion Plan	1	6.00	R	PU	24
D4.3	A report and a plan on future directions for improving metadata in the Europeana Cloud	6	9.00	R	PU	36
D4.4	Recommendation for enhancing EDM to support research-orientated content	6	10.00	R	PU	30
D4.5	Research metadata and content available in the Europeana Cloud	1	73.00	O	PU	36
Total			104.00			

# WT3: Work package description

## Description of deliverables

D4.1) Initial Metadata Ingestion Plan: Initial Metadata Ingestion Plan, timetabling how metadata will be ingested from project partners [month 4]

D4.2) Content Ingestion Plan: Content Ingestion Plan, timetabling how metadata will be ingested from project partners [month 24]

D4.3) A report and a plan on future directions for improving metadata in the Europeana Cloud: [month 36]

D4.4) Recommendation for enhancing EDM to support research-orientated content: [month 30]

D4.5) Research metadata and content available in the Europeana Cloud: [month 36]

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS18	Periodic reports on meta data ingestion	1	36	
MS19	2.4 million metadata records from project partners available in Europeana	1	36	
MS20	Update reports on content ingestion	1	36	
MS21	Report with recommendations for enhancing EDM – first draft	6	22	
MS22	Metadata and content ingestion clinics	6	24	
MS23	Sample Content ingested into Cloud	1	18	
MS24	Additional enrichment plugins to enrich Cloud data as part of the content ingestion workflow	7	36	
MS25	Additional plugins to enrich Cloud metadata as part of the content ingestion workflow are available	1	36	

# WT3: Work package description

Project Number <sup>1</sup>	325091	Project Acronym <sup>2</sup>	eCloud
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## One form per Work Package

Work package number <sup>53</sup>	WP5
Work package title	Sustaining the Europeana Cloud: Legal, Strategic and Economic Issues
Start month	1
End month	36
Lead beneficiary number <sup>55</sup>	1

## Objectives

- Investigate and resolve the legal, strategic, security and economic issues that will underpin Europeana Cloud
- Create a strategy and plan for the long-term viability of Europeana Cloud to support the Europeana Network.
- Expand the Europeana Licensing Framework to cover content (not just metadata) access for primary research and creative reuse purposes
- Agree the operating conditions of the Europeana Cloud, within an expanded Europeana Licensing Framework, and establish trust and consensus among content providers and aggregators on content storage and reuse

## Description of work and role of partners

This work package will deal with the stakeholder needs and requirements for the cloud. A series of workshops will investigate, conceive, review, resolve and validate the strategic and legal positions and the technologies produced that will underpin Europeana Cloud.

Task 5.1 Strategic Requirements for the Europeana Cloud [M1-30]

5.1.1 Creating the high level principles [M1-6]

Europeana Cloud will answer storage and access problems for content, but decisions have to be taken on its overall form. Therefore, a set of high level requirements need to be delivered to WP2 for them to start work on the particular shape Europeana Cloud should take. This will need revision in the light of what is technically feasible and other requirements that come out of task 5.2. EF together with Athena RC, Ariadne, Kennisland and LIBER create a taskforce of all Europeana Cloud content and technology partners to deliver a first set of principles to shape Cloud architecture by M3, [Milestone 5.1.1] and a procedure for obtaining input from other Europeana Network members and large scale networks such as Clarin and Dariah, that are deploying Cloud strategies. These initial outcomes will be continually matched against technical progress [M6, M12, M18 and M30] Milestones 5.1a, b, c, d Strategic Requirements Check

Task 5.2 Determining the practical requirements for the Europeana Cloud [M3-34]

Following on from the high level principles of task 5.1 EF will create a Europeana Cloud Strategic Task Force, made up of a smaller group of consortium members, derived from active parties in task 5.1 and other EU cloud funded projects. This task force will delve deeper into the practical issues through a series of workshops. The outcomes will articulate the positives and negatives of a Europeana Cloud as well as creating solutions for further input in WP2. This is will be an iterative process over the course of the project.

5.2.1 Examining and Resolving the Organisational issues. [M3-20]

EF together with Kennisland and Athena RC will use survey and sampling techniques, with members of Europeana Network, partners of Europeana Cloud, EU funded cloud projects (via a Cloud Coordination Group constructed for this project), and other research networks to uncover and articulate the legal and security issues that concern content providers and aggregators. This will be followed by mechanisms to resolve them such as facilitated workshops with the networks and the setting up of a Europeana Cloud Strategic Task Force [M3-20]. The result will be practical input into WP2 and some recommendations on the rules of engagement in the cloud to be fed into task 5.4. The Europeana Cloud Strategic Task Force will be asked to validate the results of WP2 at regular intervals. EF will create a Europeana Cloud Strategic Organisation work plan (Milestone 5.2) to include the delivery of initial research and analysis in M4, workshops [M5-M6] to resolve issues.

# WT3: Work package description

## 5.2.2 Initial research and analysis of the issues [M4]

EF will take the lead and deliver the initial research and analysis of the issues with the Europeana Cloud Consortium.

## 5.2.3 Workshops to resolve issues [M5-M6]

EF will organize workshops to resolve issues highlighted in the initial research or by the taskforces.

## 5.2.4 Create the minimum authentication and organisation requirements for the Europeana Cloud. [M6-10]

The Europeana Cloud Strategic Task Force led by EF will explore the levels of authentication required for different types of membership and other organisational issues.

Deliverable 5.1 Initial Operating Principles for the Europeana Cloud [M10]

## 5.2.5 Ongoing communication with aggregators [M13-34]

EF will initiate and maintain dialogue with the potential users of the Europeana Cloud service within the project but also within the Europeana ecosystem, gaining insight in the precise nature of the products and services required

Milestone 35 - Report on aggregators' requirements [M20]

## 5.2.6 Revising the Requirements [M6-34]

Following the discussions in 5.2.5, the requirements for use will be revised. These product requirements will list the required aspects of the Europeana Cloud service being delivered to its users - in the first instance this will be the 3 aggregators in the project and other aggregators in the Europeana ecosystem.

Deliverable 5.7 Product Requirements. This will be delivered by EF in M23 (Dec 2014).

## 5.2.7 Providing Operational Guidance [M19-34]

A handbook will be developed to give details as to how aggregators can make use of the Europeana Cloud service.

Deliverable 5.2 Handbook for the Europeana Cloud participants. Draft M24 (Jan 2015); Version 2, M28 (May 2015); Final Version - M34 (November 2015)

## Task 5.3 Exploring Licensing Issues [M3-27]

### 5.3.1 Requirements for extending the Europeana Licencing Framework [M3-27]

With Europeana Network Task Force and other providers of actual content in the project, Kennisland will gather requirements for an extension of the Europeana Licensing framework. These requirements will include the extension of the existing licensing framework to cover access to and reuse of content. This task will be closely related to the work carried out in tasks 5.1 and 5.2 and will propose an extension of the licensing framework for discussion with all relevant stakeholders. This task will also identify issues related to research re-use and access via Europeana Cloud and propose mechanisms for dealing with these. [M3-27]

### 5.3.2 Produce extended Europeana Licencing Framework [M28-36]

Based on the feedback from the Europeana Network and the project partners Kennisland will produce an extended Europeana Licencing Framework for use once Europeana Cloud becomes a sustainable service. Deliverable 5.3 [M28]

## Task 5.4 Sustainability, Governance and the Business Model [M 1-23]

### 5.4.1 Establish framework Business Plan for Europeana Cloud [M1-23]

EF will work with WP2 and other parts of WP5 to establish a framework for the Business plan to ensure economic viability. The model will be created and tested in consultation with the partners of Europeana Cloud and via the Europeana Network. Private companies who could be responsible for the hosting will also be consulted.

Business Model Europeana Cloud Deliverable 5.6 (M23)

### 5.4.2 Develop Cost model [M1-28]

A cost model for funding and participation in the Europeana Cloud by providers / aggregators / networks will be developed with EF, in relation to the expected core platform funding under the Connecting Europe Framework. The consultations and the work of task 5.2 will produce a cost benefit model for use in communicating the widespread use and take up of the Europeana Cloud. Milestone 5.4.2 (M28)



# WT3: Work package description

## 5.4.3 Develop Governance Model [M13-28]

Taking all the inputs of WP5, together with a Europeana Network Task Force, EF will develop and validate a governance model with the partners of all the networks contributing to or with the potential to contribute to the Europeana Cloud. The establishment of an advisory board is envisaged to deal with long term governance of the cloud and to be able to make decisions on future issues of the kind uncovered under task 5.2. Deliverable 5.4 as part of the Governance Model in M24. [M13-28]

Task 5. 5 Planning for other Europeana related aggregators to become part of Europeana Cloud (Europeana Foundation) [M6-36]

### Task 5.5.1 Develop and Deliver an Advocacy Programme [M25-36]

Using the iterative results of tasks 5.1 - 5.4, EF will develop an advocacy programme to be set up and delivered with WP6. It will include the commissioning of case studies, white papers, videos etc. to explain the benefits and issues of placing content into the cloud.

### 5.5.2 Building Europeana Cloud Partner Roadmap [M25-29]

Based on the results of task 5.4 on the Governance and Business Model and the work of tasks 5.1 and 5.2, a Europeana Cloud Partner Roadmap will be created by EF, outlining the growth of the Europeana Cloud once the project completes Europeana Cloud Partner Roadmap, An executable plan will be made - Europeana Cloud Partner Roadmap Deliverable 5.5 [M29]

## Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
1	EF	46.00
2	ARIADNE	1.00
3	Athena RC	1.00
4	BSB	1.00
5	CEEOL	1.00
6	CERL	1.00
7	CNR	1.00
8	DE	1.00
9	DIALNET	1.00
10	HAZU	1.00
11	KB DK	1.00
12	KL	24.00
13	KNAW	1.00
14	KU LEUVEN	1.00
15	LIBER	1.00
16	LUCE	1.00
17	MDR	0.33
18	NAF	1.00
19	NLW	1.00
20	NTK	1.00
21	OAPEN	1.00

# WT3: Work package description

## Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
22	OKF DE	1.00
23	OU	1.00
24	PSNC	1.00
25	TCD	1.00
26	TILBURA	1.00
27	UCL	1.00
28	UEDIN	1.00
29	UGOT	1.00
30	ULB	1.00
31	UNIBI	1.00
32	UPAT	1.00
33	VUA	1.00
34	Els JACOBS Advies (EJA)	2.00
Total		102.33

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D5.1	Minimum requirements for the cloud	1	10.00	R	PU	10
D5.2	Handbook for the Europeana Cloud participants	1	26.00	R	PU	28
D5.3	Revised Europeana Licensing Framework	12	20.00	R	PU	28
D5.4	Model and Governance Structure for Europeana Cloud	1	10.00	R	PU	28
D5.5	Europeana Cloud Partner Roadmap	1	10.00	R	PU	29
D5.6	Europeana Cloud Business Model	1	10.00	R	PU	23
D5.7	Product Requirements	1	6.00	R	PU	23
Total			92.00			

## Description of deliverables

D5.1) Minimum requirements for the cloud: The requirements will define the high-level principles for Europeana Cloud [month 10]

D5.2) Handbook for the Europeana Cloud participants: The handbook will show how various partners can join and interact with Europeana Cloud. A draft will be available in M24 (Jan 2015), Version 2 in M28 (May 2015) and a final version in M34 (November 2015) [month 28]

# WT3: Work package description

D5.3) Revised Europeana Licensing Framework: An extended licencing framework to guide warranties and responsibilities for governing Europeana Cloud. Version 1 available in M28 (May 2015) and version 2 in M34 (Nov 2015) [month 28]

D5.4) Model and Governance Structure for Europeana Cloud: The structure will demonstrate how Europeana Cloud can be made sustainable and governed [month 28]

D5.5) Europeana Cloud Partner Roadmap: The roadmap will demonstrate how the model for Europeana Cloud is put into practice, drawing in new aggregators. [month 29]

D5.6) Europeana Cloud Business Model: This business plan will outline the key aspects of the final Europeana Cloud business model. It will articulate the key partners, value propositions, revenue streams, resources to be used, customer segments and other aspects. It will work according to the Business Model Canvas This document will provide the basis for exploring more detailed issues to be fleshed out in WP5, eg the governance structure and cost model. It will be delivered by EF. This will be delivered in M23 (Dec 2014) [month 23]

D5.7) Product Requirements: These product requirements will list the required aspects of the Europeana Cloud service being delivered to its customers - in the first instance this will be the aggregators in the Europeana ecosystem. This will be delivered in M23 (Dec 2014). It will be led by EF and will also involve much input from WP2 [month 23]

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS26	High Level Strategic Requirements	1	3	
MS27	Strategic Requirements Check	1	6	M6,M12,M18,M30
MS28	Europeana Cloud Strategic Organisation workplan	1	4	
MS29	Cost Model	1	28	Delayed from M18

# WT3: Work package description

Project Number <sup>1</sup>	325091	Project Acronym <sup>2</sup>	eCloud
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## One form per Work Package

Work package number <sup>53</sup>	WP6
Work package title	Dissemination and Networking
Start month	1
End month	36
Lead beneficiary number <sup>55</sup>	27

## Objectives

- Creating a sustainable communications forum between the major European networks delivering content, tools and services to humanities and social science researchers.
- Agreeing on a Stakeholder (networks, users, content providers, tools and services developers) Engagement Plan.
- Widespread dissemination of the Best Practice outputs of the project as an example to other networks and to entice new entrants
- Developers, researchers and research networks making use of the Europeana Cloud and Europeana Research API and Portal to access material, tools and services

## Description of work and role of partners

### Task 6.1 Stakeholder Engagement and Infrastructure Plan (Task Leader: UCL) [M1-36]

UCL will lead the key stakeholders of the project (DARIAH, CESSDA (via UGOT), LIBER, CERL, Europeana Foundation), to create an overarching Stakeholder Engagement plan, Deliverable 6.1 M6. This plan oversees the following:

- Creation of a Europeana Research Co-ordinators Group to create and manage the long term strategic relationships between the networks (Task 6.2)
- Communication plans for the 3 major groupings involved in the project: researchers (led by DARIAH), Research Infrastructures (led by KNAW-DANS), and Europeana's networks (led by EF) (Tasks 6.2-6.4). Each plan will specify the audiences, key messages, instruments and timings for dissemination on:
  - The Europeana Research portal as a service to humanities and social science researchers
  - Embedding Europeana Research API into systems by the researcher.
  - Promoting the use of the Europeana Cloud and its tools and services

### Task 6.2 Sustainable Communications Infrastructure between European Research Networks (Task Leader: KNAW-DANS) [M1-36]

Within European Research Infrastructures, duplication has led to multiple forms of tools and services. A Europeana Research Coordinators Group (ERCG) will be established with representatives from each group to share knowledge and experience and to enable more efficient and effective strategic positioning in future. The ERCG will sponsor a shared Europeana Cloud communication plan for Research Infrastructures.

#### 6.2.1 Create Europeana Research Coordinators Group (ERCG) [M1]

Led by KNAW-DANS

#### 6.2.2 Plan ERCG Group [M2-6]

Led by KNAW-DANS, the ERCG will develop a framework to enable sustainable, long-term strategic relationships for members of Europeana Research Coordinators Group.

#### 6.2.3 Communicating Europeana Cloud to Research Infrastructures [M7-36]

The ERCG will create a communication plan for its members [Deliverable 6.2 M7] to communicate key messages about Europeana Cloud amongst European research communities and other relevant stakeholders [M7-36]

### Task 6.3 Researcher Communication Plan [M3-36] (Task Leader: ATHENA)

# WT3: Work package description

WP1 will work with researchers to develop requirements for content, tools and services and for the Europeana Research platform. ATHENA, with UGOT, TCD, NLW and DARIAH, will communicate the results of this work and the new content, tools and services and devise a Researcher Communication Plan [M11]. The plan will be executed, with the help of the ERCG and all project partners, in M11-36.

## 6.3.1. Create and Execute Researcher Communication Plan [M11-24]

Led by ATHENA, this will develop a plan for communicating the results of WP1 [Deliverable 6.3 M11] and then execute this plan

## 6.3.2 Update Researcher Communication Plan [M25-36]

With a prototype Europeana Research portal in place, ATHENA and EF will update Deliverable 6.3 and continue to execute the plan

## Task 6.4 Promoting the Europeana Cloud (Task Leader: Europeana Foundation) [M7-36]

### 6.4.1 Create Promotion of European Cloud Plan [M11]

Led by EF, this plan will promote the tools and services of Europeana Cloud to aggregators, developers and other communities. [Deliverable 6.4 M11]

### 6.4.2. Execute Europeana Content Aggregators Communications Plan [M11-M36]

The providers of content need to understand the benefits and advantages of sharing their content, and the revised Licensing Framework. With help from all project partners, the EF will ensure that aggregators and other stakeholders in the digital library community are aware of the direction and the benefits of the Europeana Cloud infrastructure. These will be communicated directly to them using the results of WP2, 3, 4 and 5.

### 6.4.3 Promoting to other communities [M13-36]

Building on the work in WP5, the EF will articulate the benefits and advantages of Europeana Cloud to an audience that extends past project partners and the immediate Europeana Network. Such an audience will include digital library and cultural heritage organisations worldwide, business communities as well as the funders and government. This will be implemented in M13-36; a conference will be held in this period.

### 6.4.4 Promoting to Developers [M25-36]

The project will not only create tools for end users, but the potential for new services and tools to be built to exploit Europeana content. The OKFN will communicate the potential for further exploitation of the APIs in Europeana and the adaptation and development of the existing tools. OKFN will execute the relevant parts of Deliverable 6.4 in M25-M36.

## Task 6.5 Project results dissemination [M3-36]

The European Foundation together with LIBER will promote the project as a whole. This will include creating and managing the project website [M3-36] and blog [M3-36], and a newsletter three times a year [M6-36].

### Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
1	EF	8.00
2	ARIADNE	1.00
3	Athena RC	1.00
4	BSB	1.00
5	CEEOL	1.00
6	CERL	3.00
7	CNR	1.00
8	DE	1.00
9	DIALNET	3.00

# WT3: Work package description

## Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
10	HAZU	1.00
11	KB DK	1.00
12	KL	1.00
13	KNAW	6.00
14	KU LEUVEN	1.00
15	LIBER	5.00
16	LUCE	1.00
17	MDR	0.00
18	NAF	1.00
19	NLW	1.00
20	NTK	1.00
21	OAPEN	1.00
22	OKF DE	5.00
23	OU	1.00
24	PSNC	1.00
25	TCD	1.00
26	TILBURA	1.00
27	UCL	10.00
28	UEDIN	1.00
29	UGOT	3.00
30	ULB	1.00
31	UNIBI	3.00
32	UPAT	1.00
33	VUA	1.00
	Total	69.00

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D6.1	Stakeholder Engagement & Infrastructure Plan	27	8.00	R	PU	6
D6.2	European Research Coordinators Group Plan	13	10.00	R	PU	7
D6.3	Researcher Communication Plan	3	21.00	R	PU	18

# WT3: Work package description

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D6.4	Promoting the Europeana Cloud	1	30.00	R	PU	18
		Total	69.00			

## Description of deliverables

D6.1) Stakeholder Engagement & Infrastructure Plan: The plan will indicate how the project will interact with all relevant stakeholders [month 6]

D6.2) European Research Coordinators Group Plan: The plan will indicate how different research infrastructures will communicate to their audiences [month 7]

D6.3) Researcher Communication Plan: This plan will communicate the results of WP1 [month 18]

D6.4) Promoting the Europeana Cloud: this plan will promote the tools and services of Europeana Cloud to aggregators, developers and other communities [month 18]

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS30	Creation of Europeana Research Coordinators Group	13	2	
MS31	Project website, blog constructed	1	2	

# WT3: Work package description

Project Number <sup>1</sup>	325091	Project Acronym <sup>2</sup>	eCloud
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## One form per Work Package

Work package number <sup>53</sup>	WP7
Work package title	Project Management
Start month	1
End month	36
Lead beneficiary number <sup>55</sup>	34

## Objectives

- Co-ordinate the work of the eCloud project and monitor progress to ensure successful delivery of the planned results and objectives on time and to budget
- Put in place mechanisms to ensure the effective operation of the Best Practice Network and the delivery of results to acceptable quality levels
- Supervise the project's management and decision making processes
- Manage the contract and assure compliance with the Commission's reporting requirements
- Ensure efficient financial management and timely disbursement of project funds
- Verify that all the work of the eCloud project stays in line with EU copyright and IPR requirements as well as the emerging Europeana agreements

## Description of work and role of partners

### Task 7.1 Activity planning and day to day management of the Network and its activities

#### 7.1.1 Ensure the Effectiveness of Communications [M1-36]

In close collaboration, EJA (Els JACOBS Advies) and EF will coordinate the project. EJA will perform the duty of Project Manager. EF will carry out the duties of Scientific Coordinator and Project Coordinator. Together they will ensure the effectiveness of communications and information flow between the management team, work package leaders, network partners and the Europeana ecosystem by employing the information distribution and communication mechanisms (set up in M1) and monitoring the progress of all major streams of communication to ensure that issues are handled effectively.

#### 7.1.2 Executive Board Meetings [M1-36]

In close collaboration, EJA as the Project Manager and EF as the Project Coordinator will organise monthly Executive Board Meetings and ensure compliance with agreed decision-making processes. They will identify key issues and decide the agenda consulting the Scientific Coordinator.

#### 7.1.3 Project Meetings [M1-36]

A Consortium Partner, with support of EJA and EF, will organise the following meetings for members of the Best Practice Network: a kick-off meeting in M1, annual plenary meetings [M13-19 and M25-31] and a final plenary meeting (to coincide with the Final Conference in M36).

### Task 7.2 Management of Commission Requirements [M1-36]

#### 7.2.1 Sign Consortium Agreement [M20-26]

EJA, with the assistance of EF, will supervise the completion and signing by the network partners of the updated and complete version of the Consortium Agreement. Deliverable 7.1 [M1-26].

#### 7.2.2 Periodic Management and Progress Reporting [M6-30]

EF as Project Coordinator, assisted by EJA as Project Manager, will provide periodic management and progress reports to the Commission as required together with participation in reviews and clustering meetings as requested. The Scientific Coordinator will provide support with the narrative aspects of the reports. Deliverable 7.2 [M6], 7.4 [M18] and 7.6 [M30]. Deliverable 7.3 [M12], 7.5 [M24].



# WT3: Work package description

## 7.2.3 Organising Payments [M1-36]

EF will be responsible for the financial management of the project, submission of cost claims and ensuring timely payments of expenses to partners and other participants.

## 7.2.4 Compile Final Report [M35-36]

In close collaboration, EJA as Project Manager and EF as Project Coordinator will compile the Final public report of Europeana Cloud. The Scientific Coordinator will provide support with the narrative aspects of the report. Deliverable 7.7 [M36].

## Task 7.3 Quality Assurance of Deliverables [M1-36]

### 7.3.1 Quality Assurance Arrangements [M1-36]

EJA, with the assistance of EF, will ensure that all project deliverables will be reviewed (based upon arrangements set up in M2) e.g. through internal review involving network partners and where necessary through reference to external experts. The Executive Board will be the mechanism to make this happen.

### 7.3.2 Ensure Regular Progress Monitoring [M1-36]

EJA, with the assistance of EF, will ensure through regular progress monitoring and chasing, that all deliverables are delivered to schedule and that any modifications to the nature of timing of deliverables are agreed by the Executive Board and reported to the Commission.

## Task 7.4 Monitoring, evaluation and risk management [M1-36]

### 7.4.1 Monitoring Project Progress [M3-36]

EJA will work with EF and the WP Leaders, taking into account overarching Europeana evaluation activities, to monitor the progress of the project via the Key Performance Indicators, reviewing the suitability of the KPIs during the course of the project.

### 7.4.2 Risk Register and Issues log [M1-36]

In close collaboration, EJA and EF will maintain a risk register and issues log, which will be updated throughout the project. The risk register and the issues log will be discussed during meetings of the Executive Board and at Work Package meetings.

## Task 7.5 Sustainability of the project [M1-36]

EJA will work with EF and WP Leaders to support embedding the outcomes of the project in the Europeana Digital Service Infrastructure, and thus helping towards Europeana Cloud becoming a sustainable service.

### Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
1	EF	13.00
2	ARIADNE	1.00
3	Athena RC	3.00
4	BSB	1.00
5	CEEOL	1.00
6	CERL	3.00
7	CNR	1.00
8	DE	1.00
9	DIALNET	1.00
10	HAZU	1.00
11	KB DK	1.00
12	KL	1.00

# WT3: Work package description

## Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
13	KNAW	1.00
14	KU LEUVEN	3.00
15	LIBER	1.00
16	LUCE	1.00
17	MDR	8.25
18	NAF	1.00
19	NLW	1.00
20	NTK	1.00
21	OAPEN	1.00
22	OKF DE	1.00
23	OU	1.00
24	PSNC	1.00
25	TCD	1.00
26	TILBURA	1.00
27	UCL	3.00
28	UEDIN	1.00
29	UGOT	1.00
30	ULB	1.00
31	UNIBI	1.00
32	UPAT	1.00
33	VUA	1.00
34	Els JACOBS Advies (EJA)	8.00
Total		68.25

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D7.1	Consortium Agreement	34	7.00	R	PP	26
D7.2	Periodic progress report	17	12.00	R	PU	6
D7.3	Annual report	17	12.00	R	PU	12
D7.4	Periodic progress report	1	12.00	R	PU	18
D7.5	Annual report	34	9.00	R	PU	24
D7.6	Periodic progress report	34	7.00	R	PU	30

# WT3: Work package description

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D7.7	Final Report	34	9.00	R	PU	36
		Total	68.00			

## Description of deliverables

D7.1) Consortium Agreement: [month 26]  
D7.2) Periodic progress report: [month 6]  
D7.3) Annual report: [month 12]  
D7.4) Periodic progress report: [month 18]  
D7.5) Annual report: [month 24]  
D7.6) Periodic progress report: [month 30]  
D7.7) Final Report: [month 36]

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS32	Successful project review at end Year 1	1	12	
MS33	Successful project review at end Year 2	1	24	
MS34	Successful review at end of project	1	36	

# WT4: List of Milestones

Project Number <sup>1</sup>	325091	Project Acronym <sup>2</sup>	eCloud
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## List and Schedule of Milestones

Milestone number <sup>59</sup>	Milestone name	WP number <sup>53</sup>	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS1	Research Communities Advisory Board established	WP1	13	1	
MS2	Desk research on Scholarly Content use complete	WP1	6	6	
MS3	Web survey complete	WP1	3	7	
MS4	Desk research on Digital Research Practices complete	WP1	19	9	
MS5	Research Communities Advisory Board meetings complete	WP1	25	12	Also M24 and M36
MS6	Evaluation workshops and write-ups complete	WP1	3	10	Also M21 and M30
MS7	Decision on the use of underlying cloud storage system	WP2	23	6	
MS8	First Prototype made available to other WPs - implementation with multiple nodes, sites and more tha	WP2	1	8	
MS9	Content and metadata loaded and accessible through test API from prototype.	WP2	1	9	
MS10	Second Prototype made available to other WPs – improvements on stability and performance	WP2	1	18	
MS11	Content and metadata loaded and accessible through Beta API from prototype	WP2	1	18	

# WT4: List of Milestones

Milestone number <sup>59</sup>	Milestone name	WP number <sup>53</sup>	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS12	Performance evaluation on improvements and limitations.	WP2	1	18	
MS13	25% of available metadata available in cloud	WP2	1	30	
MS14	First version of tools and documentation	WP3	14	12	
MS15	Second version of tools and documentation	WP3	14	24	
MS16	Third version of tools and documentation	WP3	14	36	
MS17	Europeana research Portal	WP3	1	36	
MS18	Periodic reports on meta data ingestion	WP4	1	36	
MS19	2.4 million metadata records from project partners available in Europeana	WP4	1	36	
MS20	Update reports on content ingestion	WP4	1	36	
MS21	Report with recommendations for enhancing EDM – first draft	WP4	6	22	
MS22	Metadata and content ingestion clinics	WP4	6	24	
MS23	Sample Content ingested into Cloud	WP4	1	18	
MS24	Additional enrichment plugins to enrich Cloud data as part of the content ingestion workflow	WP4	7	36	
MS25	Additional plugins to enrich Cloud metadata as part of the content ingestion workflow are available	WP4	1	36	
MS26	High Level Strategic Requirements	WP5	1	3	

# WT4: List of Milestones

Milestone number <sup>59</sup>	Milestone name	WP number <sup>53</sup>	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS27	Strategic Requirements Check	WP5	1	6	M6,M12,M18,M30
MS28	Europeana Cloud Strategic Organisation workplan	WP5	1	4	
MS29	Cost Model	WP5	1	28	Delayed from M18
MS30	Creation of Europeana Research Coordinators Group	WP6	13	2	
MS31	Project website, blog constructed	WP6	1	2	
MS32	Successful project review at end Year 1	WP7	1	12	
MS33	Successful project review at end Year 2	WP7	1	24	
MS34	Successful review at end of project	WP7	1	36	

# WT5: Tentative schedule of Project Reviews

Project Number <sup>1</sup>	325091	Project Acronym <sup>2</sup>	eCloud
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## Tentative schedule of Project Reviews

Review number <sup>65</sup>	Tentative timing	Planned venue of review	Comments, if any
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## Project Effort by Beneficiary and Work Package

Project Number <sup>1</sup>	325091	Project Acronym <sup>2</sup>	eCloud
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### Indicative efforts (man-months) per Beneficiary per Work Package

Beneficiary number and short-name	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	Total per Beneficiary
-16 - LUCE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 - EF	5.00	64.00	13.00	17.00	46.00	8.00	13.00	166.00
2 - ARIADNE	0.00	0.00	12.00	0.00	1.00	1.00	1.00	15.00
3 - Athena RC	33.00	0.00	0.00	0.00	1.00	1.00	3.00	38.00
4 - BSB	0.00	0.00	0.00	3.00	1.00	1.00	1.00	6.00
5 - CEEOL	0.00	0.00	0.00	3.00	1.00	1.00	1.00	6.00
6 - CERL	6.00	0.00	0.00	12.00	1.00	3.00	3.00	25.00
7 - CNR	0.00	24.00	0.00	6.00	1.00	1.00	1.00	33.00
8 - DE	0.00	0.00	0.00	3.00	1.00	1.00	1.00	6.00
9 - DIALNET	0.00	0.00	0.00	3.00	1.00	3.00	1.00	8.00
10 - HAZU	0.00	0.00	0.00	9.00	1.00	1.00	1.00	12.00
11 - KB DK	0.00	0.00	0.00	3.00	1.00	1.00	1.00	6.00
12 - KL	0.00	0.00	0.00	0.00	24.00	1.00	1.00	26.00
13 - KNAW	12.00	0.00	0.00	0.00	1.00	6.00	1.00	20.00
14 - KU LEUVEN	0.00	0.00	24.00	3.00	1.00	1.00	3.00	32.00
15 - LIBER	6.00	0.00	0.00	0.00	1.00	5.00	1.00	13.00
16 - LUCE	0.00	0.00	0.00	3.00	1.00	1.00	1.00	6.00
17 - MDR	0.00	0.00	0.00	0.00	0.33	0.00	8.25	8.58
18 - NAF	0.00	0.00	0.00	0.00	1.00	1.00	1.00	3.00
19 - NLW	14.00	0.00	0.00	3.00	1.00	1.00	1.00	20.00
20 - NTK	0.00	0.00	0.00	3.00	1.00	1.00	1.00	6.00
21 - OAPEN	0.00	0.00	0.00	3.00	1.00	1.00	1.00	6.00



# WT6:

## Project Effort by Beneficiary and Work Package

Beneficiary number and short-name	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	Total per Beneficiary
22 - OKF DE	0.00	0.00	16.00	0.00	1.00	5.00	1.00	23.00
23 - OU	0.00	35.00	0.00	12.00	1.00	1.00	1.00	50.00
24 - PSNC	0.00	58.00	0.00	0.00	1.00	1.00	1.00	61.00
25 - TCD	12.00	0.00	0.00	0.00	1.00	1.00	1.00	15.00
26 - TILBURA	0.00	0.00	0.00	3.00	1.00	1.00	1.00	6.00
27 - UCL	0.00	0.00	0.00	3.00	1.00	10.00	3.00	17.00
28 - UEDIN	2.00	0.00	0.00	3.00	1.00	1.00	1.00	8.00
29 - UGOT	15.00	0.00	0.00	1.00	1.00	3.00	1.00	21.00
30 - ULB	0.00	0.00	0.00	2.00	1.00	1.00	1.00	5.00
31 - UNIBI	0.00	0.00	0.00	3.00	1.00	3.00	1.00	8.00
32 - UPAT	0.00	0.00	0.00	3.00	1.00	1.00	1.00	6.00
33 - VUA	0.00	0.00	5.00	3.00	1.00	1.00	1.00	11.00
34 - Els JACOBS Advies (EJA)	0.00	0.00	0.00	0.00	2.00	0.00	8.00	10.00
35 - SEM	0.00	0.00	9.00	0.00	0.00	0.00	0.00	9.00
Total	105.00	181.00	79.00	107.00	102.33	69.00	68.25	711.58

## 1. Project number

The project number has been assigned by the Commission as the unique identifier for your project. It cannot be changed. The project number **should appear on each page of the grant agreement preparation documents (part A and part B)** to prevent errors during its handling.

## 2. Project acronym

Use the project acronym as given in the submitted proposal. It cannot be changed unless agreed so during the negotiations. The same acronym **should appear on each page of the grant agreement preparation documents (part A and part B)** to prevent errors during its handling.

## 53. Work Package number

Work package number: WP1, WP2, WP3, ..., WPn

## 55. Lead beneficiary number

Number of the beneficiary leading the work in this work package.

## 56. Person-months per work package

The total number of person-months allocated to each work package.

## 57. Start month

Relative start date for the work in the specific work packages, month 1 marking the start date of the project, and all other start dates being relative to this start date.

## 58. End month

Relative end date, month 1 marking the start date of the project, and all end dates being relative to this start date.

## 59. Milestone number

Milestone number: MS1, MS2, ..., MSn

## 60. Delivery date for Milestone

Month in which the milestone will be achieved. Month 1 marking the start date of the project, and all delivery dates being relative to this start date.

## 61. Deliverable number

Deliverable numbers in order of delivery dates: D1 – Dn

## 62. Nature

Please indicate the nature of the deliverable using one of the following codes

**R** = Report, **P** = Prototype, **D** = Demonstrator, **O** = Other

## 63. Dissemination level

Please indicate the dissemination level using one of the following codes:

- **PU** = Public
- **PP** = Restricted to other programme participants (including the Commission Services)
- **RE** = Restricted to a group specified by the consortium (including the Commission Services)
- **CO** = Confidential, only for members of the consortium (including the Commission Services)
- **Restreint UE** = Classified with the classification level "Restreint UE" according to Commission Decision 2001/844 and amendments
- **Confidentiel UE** = Classified with the mention of the classification level "Confidentiel UE" according to Commission Decision 2001/844 and amendments
- **Secret UE** = Classified with the mention of the classification level "Secret UE" according to Commission Decision 2001/844 and amendments

## 64. Delivery date for Deliverable

Month in which the deliverables will be available. Month 1 marking the start date of the project, and all delivery dates being relative to this start date

## 65. Review number

Review number: RV1, RV2, ..., RVn

**66. Tentative timing of reviews**

Month after which the review will take place. Month 1 marking the start date of the project, and all delivery dates being relative to this start date.

**67. Person-months per Deliverable**

The total number of person-month allocated to each deliverable.

## **ICT PSP sixth call for proposals 2012**

### **Best Practice Network**

#### **2.1 Europeana and creativity a) Content for Europeana**

# Europeana Cloud

Part B of Annex 1 to the Grant Agreement

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## **PROJECT PROFILE** (Short, precise, verifiable) – **maximum 2 pages**

Proposal acronym: eCloud/ Proposal full title: Europeana Cloud: Unlocking Europe's Research via The Cloud

### **Information on the Best Practice Network**

#### **Objectives**

Europeana Cloud is a Best Practice Network, co-coordinated by the Europeana Foundation, designed to establish a cloud-based system for Europeana and its aggregators. In Europeana Cloud will be new content, new metadata, a new linked storage system, new tools and services for researchers and a new platform - Europeana Research.

Content providers and aggregators, across the European information landscape, urgently need a cheaper, more sustainable technical infrastructure that is capable of storing both metadata and content. Researchers require a digital space where they can undertake innovative exploration and analysis of Europe's digitised content. Europeana needs to get closer to the target of 30 million items by 2015. Europeana Cloud meets those needs.

1. To provide access, at Europeana, to **2.4m new metadata records and 5m research-focused digital items** from across European universities, libraries, data centres and publishers.
2. **To create a cloud-based infrastructure** capable of delivering cost-efficient content and metadata storage for stakeholders across Europe
3. To **understand and address the legal, strategic and economic issues** of a cloud-based system for content cultural institutions and domain aggregators
4. To achieve **broad consensus on the benefits of a cloud-based system**
5. To develop a digital platform, named Europeana Research, to discover and use European research content
6. Via this cloud, **provide tools and services for researchers that permit innovative research** that exploits digitised content in Europeana

This is a vital project for the European network of content providers and aggregators, moving to a infrastructure that can deal not just with descriptive metadata but actual digitised content as well.

#### **Activities and Outcomes**

Europeana Cloud has three key activities - ingesting content for users, creating the cloud to manage that content, and letting researchers discover and use that content. In dealing with content and metadata, it is a vital project for the European network of content providers and aggregators.

**Ingest Content for Users. For a targeted set of users - humanities and social science scholars - access to digitised content is key.** This project thus assembles a rich range of new content providers (universities, archives, publishers, data centres) to provide valuable, research-focused content. Existing Europeana partners will also be approached for content, further enriching the source material available for non-commercial use. This content (full-text, datasets, monographs etc.) will be presented via a new Europeana Research platform, offering scholars a vibrant source of research material and a much closer connection with Europeana.

**Managing the Content. For the Europeana Network of aggregators and content providers, there is a pressing need to create an infrastructure that sustains their work.** The current system of dispersed silos of aggregators has economic inefficiencies that hinder the effectiveness of Europeana. The development of Europeana Cloud offers significant potential for innovation - removing duplication of work, permitting easy sharing of open data and, crucially, reducing the time and costs of aggregating Europe's digitised content. The relevant activity in this project will therefore be technical, in creating a working instance of this cloud to ingest this new content, but also strategic. It will negotiate the legal and economic challenges and ensure consensus within the broader Europeana Network of aggregators and content providers.

**Content Discovery. Digitised sources that inform research are often dispersed or hidden from the scholarly community.** Even when they are located, researchers often lack the tools that can exploit such material. Therefore, a key activity for Europeana Cloud is to offer fast, intelligent discovery mechanisms for users and also develop tools that allow sophisticated interaction (analysis, annotation, transcription) with such content. Such tools can underpin new methodologies, drive innovative research and deepen the bond between the research community and Europeana.

These activities will produce four key outcomes:

1. **2.4m metadata records and 5m items of high quality digital content available** for re-use by researchers
2. A **new cloud-based infrastructure** involving Europeana, the Polish Digital Library Federation and The European Library, that provides an efficient, scalable model for Europeana and its aggregators
3. The necessary **plans and consensus to ensure the uptake of this infrastructure** within the broader Europeana network of aggregators
4. The **development of the Europeana Research platform**, an open aggregation of research content, aimed at humanities and social science researchers, with accompanying tools and services

### **Consortium**

This proposal assembles a rich range of European content providers with the technical and strategic awareness to create and sustain a cloud-based infrastructure.

As lead, the **Europeana Foundation** will draw on its technical and strategic expertise (in projects such as Europeana Libraries, Europeana Connect and Europeana Awareness) to create a sustainable model for Europeana Cloud. External expertise is also essential; the **Open University** and the **Poznan Supercomputing and Networking Center** will provide technical validation, and **Kennisland** legal and strategic knowledge. Engaging the broader Europeana Network of aggregators will also be essential for validation.

In terms of developing a network with researchers, the integration of eight university members of **DARIAH** (Digital Research Infrastructure for the Arts and Humanities) and **CESSDA** (Council of European Social Science Data Archives) is crucial. Together, they can co-ordinate and interact with researchers that Europeana has previously not been able to reach. Other partners are drawn from universities, libraries, archives and museums in Europe, providing new types of researcher-focused content and also forming a valuable grouping within this Best Practice Network.

### **Impact**

For the **EU**, Europeana Cloud will meet all three key aims in the 'Europeana and Creativity' objective of the ICT PSP Work Programme for 2012, and the specific objective 2.1.a by adding on Europeana by adding 2.4m metadata records, and 5m digital items. For **Europeana**, the Europeana Cloud will reduce the time and cost in sharing and storing content and metadata, thereby providing a trusted, efficient, cheaper and more effective way of making Europe's cultural heritage accessible.

For **researchers**, the Europeana Research platform will offer new tools to explore Europe's research content, opening up new paths for research, creativity and innovation. For **content providers and aggregators**, the project provides a safe environment in which to experiment with the reuse of their digital material and a cost-efficient mechanism for its storage. For **library partners**, the project strengthens the European connection between their valuable content and the vast range of engaged research communities.

For **EU citizens**, the project furthers the opportunity for citizen science, providing a means of discovery of rich cultural and scholarly content held in Europe's cultural institutions.

## Section B1. Relevance

### B1.1. Project objectives

*This section should explain the concept of the project, i.e. its objectives and the proposed action. This section should also explain in detail how the proposed action aligns with the general objectives of the Work Programme and its addressed specific objective relevant for the project.*

Europeana Cloud, submitted under Objective 2.1.a of the current ICT-PSP call ('Content for Europeana'), is a Best Practice Network designed to: ingest 7.4m items (2.4m metadata records, 5m digitised objects) into Europeana; place the content and all metadata in a cloud-based infrastructure for better access and sustainability; and thirdly to allow researchers in the humanities and social sciences to exploit this content. In harvesting content **and** metadata, this project is a step-change for Europeana.

In developing a shared infrastructure for Europeana and its aggregators, the proposal responds to the aims of the Digital Agenda for Europe, in particular mission point 79 ("*Propose a sustainable model for financing the Europeana digital library*"). In developing a cloud-based infrastructure to be exploited by Europeana and its aggregators, it also meets the requested action in the ICT-PSP call to "explore the potential of cloud computing technologies for Europeana".

*The New Renaissance* report by the Comité des Sages on bringing Europe's cultural heritage online provides further context for the project. This emphasised that Europe needs to maintain investments in this area in order to continue its leading role as an international player in the field of culture and creative content; it additionally stated that "Europeana should ... explore the opportunities of cloud computing." Similar comments were also made in the European Commission's *Recommendation on the Digitisation and Online Accessibility of Cultural Material* of October 2011, particularly in the context of the potential of the content for learning and education.<sup>2</sup>

Finally, Europeana Cloud meets the stated general aims of the 2012 PSP ICT Work Programme, in particular the aim for "smart sustainable and inclusive growth by accelerating the wider uptake and best use of innovative digital technologies and content."

The project **enhances the Europeana content base by aggregating cultural heritage content that complements collections already accessible through Europeana**. The content is targeted to appeal to a **broad public** but also ensures that the content is available for reuse by a targeted group of humanities and social science scholars. Additionally it explores **the potential of cloud computing technologies for Europeana** putting in place a cloud infrastructure for the use of Europeana and anyone else wishing to access the content and tools it stores. It also creates **new ways of aggregating, storing and reusing digital content** through use of the cloud infrastructure to develop Europeana Research – a platform for researchers to access content, metadata and tools via Europeana Cloud. The cloud will not only create ease of access to the material discoverable via

<sup>1</sup> The New Renaissance (2010). Report of the Comité des Sages. Reflection Group on Bringing Europe's Cultural Heritage Online

<sup>2</sup> European Commission: C(2011)7579 final. Recommendation on the digitisation and online accessibility of cultural material and digital preservation.



Europeana but also that held in other networks such as CLARIN, CESSDA, DARIAH or the incipient Digital Public Library of America (DPLA).

The key objectives of Europeana Cloud are:

- 1. To provide access, via Europeana, to 7.4 million research-focused digital records and objects from across European cultural heritage institutions and private sector providers.**

As mentioned above, previous Europeana aggregation projects have focused on supplying large amounts of metadata (and occasionally content) with the aim of distributing it to a wide range of users. While this has created an exceptionally large store of data and a solid user base, there is now opportunity to obtain content targetted at specific user communities. Europeana Cloud concentrates on both content and metadata valuable for those working within the academic domain, particularly the humanities and social sciences.

Therefore, as part of the specific objective request to “enhance the Europeana content base”, Europeana Cloud will aggregate a rich variety of sources that will “reflect the diversity and richness of Europe’s content.” This content also reflects Europe’s linguistic and cultural diversity. Valuable scholarly content is being sourced from institutions as diverse as the Croatian Academy of Arts and Sciences, the Hungarian University of Debrecen and the Bavarian Library Consortium. Languages featured include Czech, Dutch German, English, French, Italian, Latin, Russian, Greek and Hungarian. This new content balances the current geographic spread, with solid contributions from Belgium, Croatia, Finland and Romania as well as adding audio and video files from the middle of the 20th century, thus helping to address the 20th-century Europeana black hole. In total, the Europeana Cloud proposal involves 16 organisations or consortia who have not offered content to Europeana before.

The content to be ingested in Europeana Cloud will be reflective of the new types of digital data that are being created in the academic domain, but are not yet included within Europeana. Such types of data include digital scholarly monographs, made available by publishers who are following the Open Access mode of dissemination, and research data sets, the digital evidential bases created by scholars undertaking their research.

Aggregating such content presents enormous opportunities for strengthening the linkages between Europe’s shared cultural heritage. It presents the possibility to create a multitude of links among the existing 23m records in Europeana and also within the new types of content. References to an event, person or place can occur in multiple areas. Europeana Cloud starts to locate such references in different records and make concrete links between them. The content becomes alive, interpreted and contextualised via multiple references in multiple scholarly books and journals. The same is true for the research data sets – much of the evidence collated and referenced within such scholarly works has implicit connections with Europeana content that can be made explicit once shared via Europeana.

- 2. To create a cloud-based infrastructure capable of delivering cost-efficient storage for stakeholders across Europe**

Currently, Europeana and its aggregators each have their own individual technical architectures. Among these architectures, there are systems in place for transferring content and making metadata interoperable, but the process of exchange and conversion between these different systems duplicates

work, uses expensive resources and prevents the easy access required for the manipulation of data and content. In the long term, such an arrangement of systems is not sustainable.

Therefore, in line with the general objectives of PSP ICT Work Programme, Europeana Cloud proposes the creation of a single Europeana Cloud. Such a cloud will tailor the existing systems under the management of Europeana and its aggregators to create a common digital space within the European Network. Such an infrastructure also guarantees sustainability of access to our digital cultural heritage, particularly if Europeana succeeds in becoming a Core Platform under the proposed Connecting Europe Facility.<sup>3</sup>

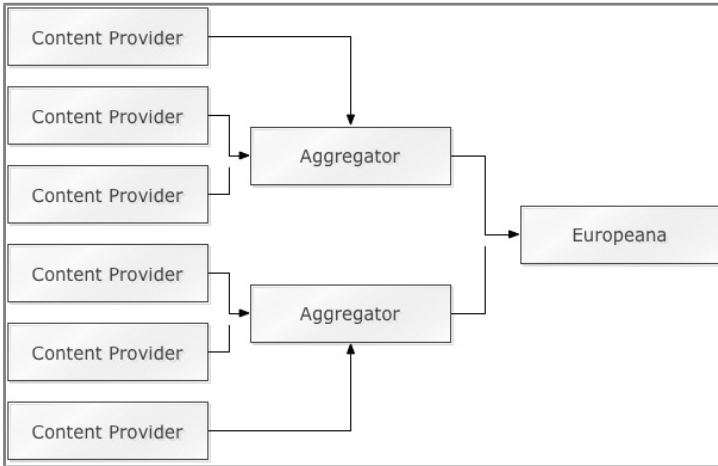
The project will ingest the new content outlined elsewhere in this proposal with the contents of two partner aggregators (that of The European Library and the Polish Digital Library Federation) plus the metadata store of Europeana itself into Europeana Cloud. At the project's completion, the existence of this infrastructure, allied to an exploitation plan for expanding it to all Europe's aggregators, will enable Europeana Cloud to become the shared space for material relating to Europe's cultural heritage.

The diagrams on the following page demonstrate the change that the Europeana Cloud project aims to make to the infrastructure of Europeana and its aggregators.

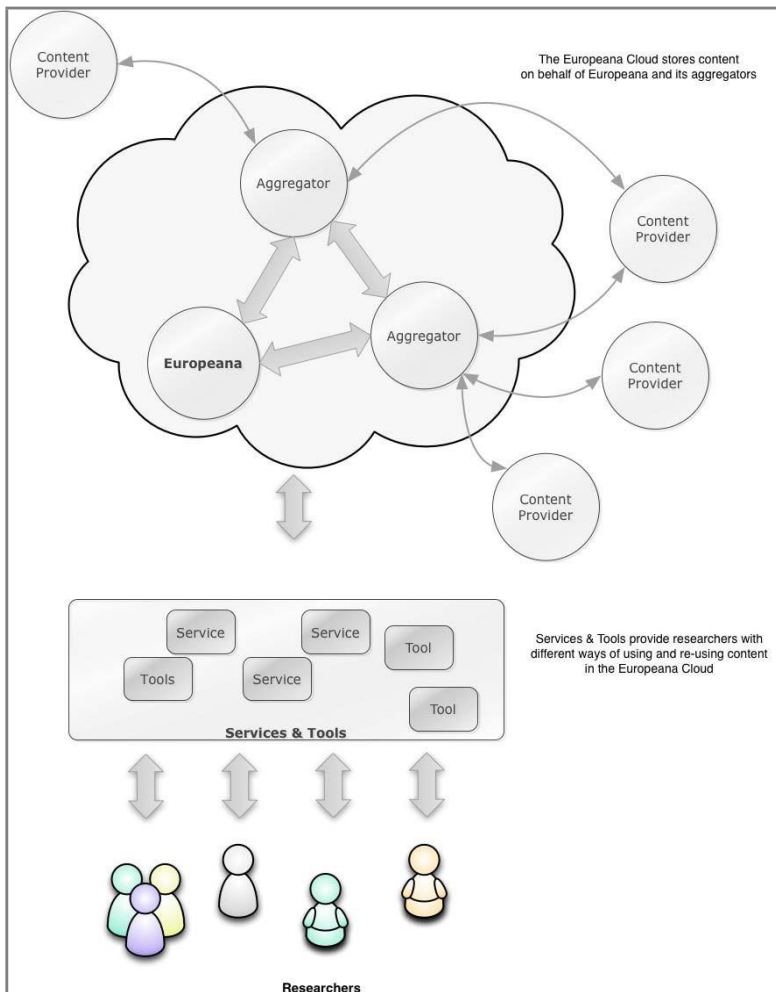
---

<sup>3</sup> <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/11/1200>

*The current dispersed, hierarchical technical infrastructure, largely restricted to one-way passing of data direct to Europeana:*



*Below is the technical infrastructure on completion of the project. Note the ability of aggregators to exchange data more easily, and for multiple services to be provided to researchers:*



### **3. To understand and address the legal, strategic and economic issues of such a system for cultural institutions and domain aggregators**

The opportunities presented by a shared digital space for the Europeana Network of aggregators and content providers<sup>4</sup> in the cultural heritage sphere are tremendous. But to fully exploit such advantages, a number of issues needs to be carefully handled.

Issues of licencing will be at the heart of this. The previous focus of Europeana has been to ingest metadata. This project provides a step-change to this. It will be providing the opportunity for content providers to share their fully digitised content (whether that be images, data-sets or monographs) within the cloud-based infrastructure, focusing on non-commercial use within the scholarly domain. The implications of sharing content via a pan-European system must be sensitive to local concerns about such exchange of data as well as regulatory frameworks at national and European level; the project will address these and other strategic issues. What are the technical requirements for each partner that wishes to be part of Europeana Cloud? What are the levels of financial and managerial engagement that differently-sized members partners from different EU states need to contribute? How are issues of trust and security amongst members ensured?

Specific work package tasks, led by experts at Kennisland (developers of the Europeana Licensing Framework) will deal with these challenges. This will be allied to the existing experience of the Europeana Foundation in current projects such as Europeana Version 2, Europeana Awareness and Linked Heritage plus past projects such as Europeana Connect.

### **4. To achieve broad consensus on the benefits of a cloud-based system**

For the long-term take up of the Europeana Cloud, consensus amongst its future members - the Europeana Network of content providers and aggregators - is crucial.

Specific work tasks in both WP5 and WP6 will therefore play a role in articulating the advantages of joining Europeana Cloud. WP5 will explore the challenges but also the the key advantages of establishing a cloud infrastructure over the current dispersed system. It will demonstrate how Europeana Cloud provides benefits that current systems to not easily permit. This will include, for example, how Europeana Cloud enables the sharing of data; how it eliminates duplication of effort; how it creates an ecosystem for enrichment service; and how it reduces process time and reduces cost.

But achieving consensus will also depend on sophisticated dialogue. A Europeana Network Task Force will be established that will provide a coherent voice for the Europeana Network members. Other channels for discussion will be constructed via existing events or via kick-off meetings and other seminars scheduled within the project. This will allow the aggregators to provide input to the strategic, legal and economic issues addressed in the project.

### **5. To develop Europeana Research as a thematic portal to discover and use European research content**

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<sup>4</sup> The Europeana Network is a network of content providers and aggregators who work with Europeana. It currently has 420 members.

A European Science Foundation report on Research Infrastructures in the Arts and Humanities found “that making our cultural heritage accessible in digital form plus its sensitive interlinking with other resources opens a new frontier for Humanities research for addressing ‘grand challenges’ in the Humanities themselves and at the interface with other research domains.”<sup>5</sup>

This project offers Europeana the opportunity to present itself as one those key infrastructures for researchers. As it ingests content relevant to research communities, it will work to develop the Europeana Research platform. Evolving from the current European Library (TEL) website<sup>6</sup>, this will be a portal that will provide tailored discovery services for the research community, and tools that permit users to analyse and explore that data.

A crucial partner in this is the DARIAH network of arts and humanities researchers, joined by representatives from CESSDA.<sup>7</sup> Academics working in these domains will be one of the most fertile exploiters of Europeana cultural content, and it is therefore imperative that Europeana approach this group if it wishes to see the creative use and re-use of the content it has been aggregating. In this context, partners from 8 universities involved with DARIAH and CESSDA are included in the proposal, and have key roles to play in shaping the future of Europeana Research and researcher attitudes towards it.

Early stages of the project will therefore take time to further understand how users locate data and the value of the content within Europeana to academic research. This in turn will inform the shape and content strategy of the Europeana Research platform, and also provide the understanding of scholarly workflows which will assist in shaping the objective below.

## **6. Via the cloud, provide tools and services for researchers that permit innovative research that exploits digitised content in Europeana**

In order to maximise the use and re-use of content in Europeana, the outputs from this project need to provide more than a discovery portal; they must offer researchers the tools that allow them to manipulate and exploit data in innovative ways. The project will therefore develop a suite of tools that allows scholars to interact with the content that they require from the Europeana Cloud.

The precise tools to be developed within the project are dependent on user feedback. However, the areas of scholarly interest have been identified. The areas to be approached are:

- *Accessing and Analysing Big Data* - permitting scholars to download, and therefore manipulate and analyse large data sets
- *Annotation* - allowing researchers to annotate documents and to share these annotations
- *Transcription* - allowing users to transcribe and interpret documents
- *Discovery and Access* - ensuring that services are tailored so that research material is discoverable by the scholarly community (this links to the previous objective)

<sup>5</sup> <http://www.esf.org/media-centre/ext-single-news/article/humanities-researchers-and-digital-technologies-building-infrastructures-for-a-new-age-776.html>

<sup>6</sup> <http://www.theeuropeanlibrary.org> The European Library team come under the remit of the Europeana Foundation, and therefore are not listed as separate partners in this project.

<sup>7</sup> Digital Research Infrastructure for the Arts and Humanities, <http://dariah.eu/>; Council of European Social Science Data Archives, <http://www.cessda.org/>

This work will be done in tandem with a team of partners assembled by the Katholieke Universiteit Leuven, who have significant expertise in providing tools for the research and teaching communities within higher education. This includes the Open Knowledge Foundation, who will be updating their Textus tool to allow for the annotations of digitised books, and the VU University Amsterdam, who will explore the possibilities for visualising bibliographic data.

Such an approach - listening to user needs and creating smart tools responsive to those needs - is vital if the work objective of the Work Programme is to be met: “stimulating smart, sustainable and inclusive growth by accelerating the wider uptake and best use of innovative digital technologies and content.”

## **B1.2 Contribution to the European Digital Library initiative (in one page maximum)**

The key objectives of Europeana Cloud are fundamental to the advancement of Europeana and the four 'strategic tracks' of its 2011-15 Strategic Plan

- It will add 2.4m metadata records and 5m actual digital items to Europeana for the first time.
- Europeana Cloud will accelerate the pace of exchange of data and content within Europeana. There will be an accompanying reduction in time and effort and the enabling of the more granular use and re-use of contributed data.
- It will allow Europeana to target specific user groups, in this case researchers in the humanities and social sciences.

### **1. Aggregate - Building the open, trusted source for European cultural heritage content**

Europeana Cloud allows for the extension and development of the model underpinning aggregation, building a cloud infrastructure that provides greater efficiencies in terms of time and cost and is responsive to the needs of a wide range of stakeholders.

### **2. Facilitate – Support the cultural heritage sector through knowledge transfer, innovation and advocacy**

In building Europeana Cloud the project will engage in extensive dialogues with the entire Europeana Network of Aggregators – who “promote dialogue and collaboration between librarians, curators, archivists and the creative industries, to work together on areas of common interest” – to ensure that the advantages and benefits of a shared technical infrastructure are appreciated and can be exploited an EU-wide level.

### **3. Distribute – Make their heritage available to users, wherever they are**

One of the key stakeholder groups in the Europeana Cloud project is scholars in the humanities and social sciences. The development of services and applications for such users is a crucial component of the Europeana Cloud. The involvement of the DARIAH consortium will permit not only the development of tools upon new and existing Europeana content, but also for the committed engagement with the university audience.

### **4. Engage – Cultivate new ways for users to participate in their cultural heritage**

Just as Europeana Cloud distributes new content and new services, so it learns new ways to engage its end-users Beyond the academic community, Europeana Cloud will engage with the community of archivists, curators and librarians who form the Europeana Network. By constructing the Europeana Cloud as a shared space, it permits “cooperation in the development of new relationships between these custodians, their content and the crowd.”





## Section B2. Impact

### B2.1a. Target outcomes and expected impact

*Describe how your project will contribute towards the expected target outcome and characteristics listed in the addressed specific objective in the ICT PSP Work Programme.*

*Describe how your project will contribute towards the expected impacts listed in the Work Programme in relation to the chosen objective. Mention the steps that will be needed to bring about these impacts. Explain why this contribution requires a European (rather than a national or local) approach. Mention any assumptions and external factors that may determine whether the impacts will be achieved, including the main barriers and foreseeable risk factors. Expected Impact: Increase quantity and quality of digital content available through Europeana from across Europe and associated countries*

Europeana Cloud will directly aggregate 5m items of digitised content and 2.4m metadata records, from at least 16 countries, thus providing a significant contribution to the 2015 target of aggregating 30m digital records.

The Europeana Foundation will also approach over 100 current providers of metadata to allow their fully digitised items to be used for research purposes. This includes museums such as the Rijksmuseum, the V&A (who have both happily agreed to such reuse) as well as small and medium cultural heritage institutions who have particularly interesting collections on subjects such as WW2. Several of the Audio Visual collections have volunteered to ‘donate’ content for research purposes, such as Beeld en Geluid in the Netherlands, British Library Sound Archive and the Institut national d’Audiovisual, in Paris. Use of this content by the research community will allay the fears of many content providers who are concerned about loss of control and commercial use of their digital treasure. By concentrating on the issues of bringing in and aggregating content rather than just metadata, this project provides a test bed for the issues surrounding the reuse of content from our cultural heritage institutions, be these technical, legal or perceptual.

The content will be quality-assured, drawn from the archives, libraries, museums, audio visual collections and universities, and will be the basis for the use of tools of direct relevance to researchers in the humanities and social sciences.

#### *Focus and Outcomes*

The project will enhance Europeana’s content, with material of interest to both the research community and a broad public. A key technical development underpinning this is the development of a cloud computing infrastructure that will provide a scalable, sustainable model. This model will be of use for Europeana and its aggregators and, by implication, the whole commonwealth of cultural institutions within Europe. A European approach, rather than a national or local one, is integral to this proposal. Without tackling the issue at a continent-wide level, the development of a common technical space would simply not be feasible.

Secondly will be the creation of the Europeana Research platform, an open aggregation of research content, focused on humanities and social sciences, with accompanying tools and services.

The steps required to achieve this are the following:

1. Ingesting content into Europeana from 16 partners, representing 16 countries, 2.4m metadata records and 5m digital objects
2. Undertake early user-needs analysis, gathering requirements from the stakeholders who will benefit from the construction of Europeana Cloud and from the scholarly users of the Europeana Research platform
3. Using a responsive development and feedback loop, develop Europeana Cloud, which will act as a fully working system for Europeana and the aggregators included in the project
4. Investigate the strategic, legal and economic issues related to the development of the Europeana Cloud, and build the necessary consensus to ensure its adoption within the Europeana Network after the project has completed.
5. Embark upon targeted dissemination to ensure the long-term take up of both the technical infrastructure and the research-focused tools and services developed around this new content

Careful organisation of these steps is critical if this project is to carry out its objectives. Europeana and The European Library are now well experienced in aggregating metadata from content providers, but doing so in the context of developing a new cloud system and ingesting and managing the digitised items will require meticulous planning to ensure the following impacts are met:

**Impact Area 1 – Europeana Cloud will achieve a much closer relationship with the research community in the humanities and social sciences, thus permitting:**

- Greater usage of new and existing Europeana content within the humanities and social sciences community
- Via the Europeana Research platform, new technical and intellectual approaches to Europeana content
- Established working agreements between European research infrastructure projects such as DARIAH and Europeana
- A content strategy that incorporates and responds to the needs of humanities and social science communities

**Impact Area 2 – Europeana Research will mean greater exposure of research-focused content from participating cultural heritage institutions through:**

- Greater distribution and therefore impact of relevant scholarly content from participating cultural heritage institutions
- Europeana Cloud, with reliable procedures for the passing and storing of metadata and content in multiple locations, thus facilitating curation and dissemination of digital content

**Impact Area 3 – Europeana Cloud will increase efficiencies for participating aggregators, thus:**

- Eliminating the need for repeating processes in harvesting and processing metadata
- Reducing the time in processing and quality-checking metadata
- Allowing for the sharing of technical resources of others within Europeana Cloud
- Providing cost savings in terms of costs and staff time throughout the Europeana Network

**Impact Area 4 – Europeana Cloud will create a dynamic, scalable infrastructure that facilitates future innovation and cheaper costs for the Europeana Network. On its completion, this infrastructure, will permit:**

- The empowerment of the Europeana Network to share and re-use data and consequently provide more tailored services for end-users
- The reduction of time and cost effort in exchanging data within the Europeana Network
- Long-term agility in maintaining underlying software and source code
- The reduction of the costs in sustaining national and domain aggregators

**Impact Area 5 - Europeana Cloud will provide greater understanding of the strategic issues in employing a cloud-based infrastructure via:**

- Development of suitable legal frameworks to support existence of metadata and content in Europeana Cloud
- Increase knowledge of the financial benefits of the cloud and knowledge of how to take advantage of them once the project has ended
- Firm, validated plans to deploy such an infrastructure for the entire Europeana network.

**Impact Area 6 – Europeana Cloud will add a total 7.4 million digital items to Europeana.**

- **2.4m additional metadata records, thus contributing to the target of 30m by 2015**
- **5m digitised content items, thus breaking new territory for Europeana in terms of storing content**

**Impact Area 7 – Europeana Cloud will present Europeana with enhanced capability for interacting with its partners, as follows:**

- A sustainable, scalable technical infrastructure will permit much greater flexibility in co- operating within the Europeana Network
- The needs of users in the academic environment, achieved through working with the DARIAH and CESSDA networks
- Greater strategic dialogue with other related stakeholders

Metrics by which these outcomes can be assessed are provided in section B3.4

There are two significant risks, the mitigation of which is built into the project. A full list of risks is shown in Table 5 below.

Firstly, building Europeana Cloud. It is not a brand new infrastructure, in that much of its development still depends on reconfiguring existing aggregator systems rather than building them from scratch. Nevertheless, adopting such a system still carries its own risks. Therefore, external viewpoints have been built into the relevant work package to provide ongoing monitoring and evaluation, and ensure that developing infrastructure remains in touch with the user requirements.

More than the technical issues, however, it is the strategic challenge that requires greater attention, as the long-term aim is for the entire Europeana Network to adopt Europeana Cloud. There are significant legal, economic and political arguments that need to be made to ensure this happens; if not, then the impact of the Europeana Cloud is diminished.

To counter this risk, the Europeana Cloud project will therefore establish secure strategic foundations for Europeana Cloud. This will not only involve deliberating on the aforementioned issues, but undertaking such deliberations within the wider community. Engaging the wider network in the plans from the beginning greatly reduces the risk of ‘non take-up’ further down the line.

The second risk concerns the development of tools and content for humanities researchers. Despite the wealth of material within Europeana and ingested within this project, there is a risk that particular researcher workflows are dependent on corpora of material that are only partly present within Europeana. Such a position would therefore weaken the resultant tools developed as part of the project. To counter this, the Europeana Cloud proposal offers to ingest further content (Listed in Table 0.B) during the lifetime of the project. Based on the specific feedback received in the work package related to research communities, Europeana Cloud will work with relevant content providers to add 5m digital objects to the 2.4m digital objects already identified from new partners in this proposal.

**B.2.1b. Underlying content**

*(This section only for proposals addressing 2.1 Europeana and creativity a) Content for Europeana*

*Describe the digital content that will be made accessible and re-usable by the end of the project in terms of:*

*i) Content*

*Complete the Table 0 template on content. The table describes the content items that the project will make available to the target users by the end of the project. The descriptors in each row should identify technical features (format, type) and indicate the subject matter and topics the items cover.*

**Table 0.a – Content from New Partners**

This content table refers to metadata records pointing to digital objects on project partners sites.

Country Content Partner	Quantity and type	Estimated Records -> Europe	Collection title and description (topic or theme that content is about).	Language	Format	Existing Metadata	IPR
Belgium U Bruxelles	Currently 161300 pages from 27 books and 9 journal titles	36	ULB library digitised collection. Subject: History and social sciences and humanities. Digitised copies of books and complete journal series from the ULB library collections, mainly dating from the late 19th century and early 20th century, out of copyright and out of print. More recent books digitised in agreement with authors or copyright owner. In French. Growing collection.	French	Format: PDF and PDF/A  Quality : 250-350 dpi  B&W text; greyscale for illustrations	All records are available as:  - Dublin Core  - MODS  - MODS encapsulated in DIDL container (DRIVER profile)  Metadata is in French	Mainly public domain and a few copyrighted books; when copyrighted, access is free and authorised uses = download, copy, print for private use, research and teaching; indicated on last page of digital copy
Belgium U Bruxelles	36800 pages, around 76 books, 81 journals	157	Editions de l'Université de Bruxelles digitised collection. Subject: Law, economics, political science, philosophy, history, geography. Digitised copies of research monographs and textbooks published by the Editions de l'Université de Bruxelles and which are out of print. Continuously growing collection. Currently, earliest book	French	Format: PDF and PDF/A  Quality : 250-350 dpi	All records are available as:  - Dublin Core  - MODS  - MODS encapsulated in DIDL container (DRIVER profile)	Copyrighted with free internet access and authorised uses = download, copy, print for private use, research and teaching; indicated on last page of digital copy

			dated 1933, most recent 2010. In French		for illustrations	Metadata is in French	
Belgium U Bruxelles	29900 pages; complete collections of 8 journals	8	Belgian literary journals. Subject: Belgian literature in French. Digitised copies of complete collections of literary journals (from 1st to last number) published in Belgium at the end of the 19th century and early 20th century. Of interest for the quality of their contents, typography, illustrations and critiques. In French. Growing collection.	French	Format: PDF and PDF/A  Quality : 250- 350 dpi  B&W text; greyscale for illustration s	All records are available as:  - Dublin Core  - MODS  - MODS encapsulated in DIDL container (DRIVER profile)  Metadata is in French	Public domain or assimilated
Belgium U Bruxelles	2100 pages from books and articles, comprising articles, reviews, chapters, biographies and reports	35	Pierre Gilbert publications in egyptology. Subject: Egyptology. Digitised copies of books and articles written by Pierre Gilbert, professor of Egyptology at ULB (20th century).	French	Format: PDF and PDF/A  Quality : 250- 350 dpi  B&W text; greyscale for illustration s	All records are available as:  - Dublin Core  - MODS  - MODS encapsulated in DIDL container (DRIVER profile)  Metadata is in French	Copyrighted with free internet access and authorised uses = download, copy, print for private use, research and teaching; indicated on last page of digital copy
Belgium U Bruxelles	8200 pages from books and articles,	191	Henri Pirenne and Henri Laurent publications. Subject: Medieval history, history of Belgium. Digitised copies of books and articles written by Henri Pirenne and Henri Laurent, famous professors of history, whose works have recently become public domain	French	Format: PDF and PDF/A  Quality : 250- 350 dpi  B&W	All records are available as:  - Dublin Core  - MODS  - MODS encapsulated in DIDL container (DRIVER profile)	Public domain

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					illustrations	Metadata is in French	
Belgium KUK - Leuven	1,000 images	1000	The archives of the old KU Leuven university	Latin, French, Dutch	JPEG – mostly black and white	No existing metadata	Public domain
Belgium KUK - Leuven	2,500 books	2500	Books and doctoral theses - the scientific output of the Old University of Leuven between 1425 to 1835.	Latin, French, Dutch	JPEG – mostly black and white	Mar-21	Public domain
Belgium KUK - Leuven	1,350 images	1350	Collection of pamphlets and ordinances from Low Countries	Dutch	JPEG – mostly black and white	No existing metadata	Public domain
Belgium KUK - Leuven	2000 items	2000	Books, manuscripts letters, images on history of Fencing	French, German, Spanish, English and other language	JPEG	Mar-21	Public domain
Croatia Academy of Sciences & Arts	17 textual collections comprising 322227 documents,	8775	17 textual collections on Croatian arts, history and science, including Documents for the History of Croatian Literature and Miscellany on Folk Life and Customs	Mainly Croatia	PDF, JPEG	Common bibliographic metadata according UNIMARC and ISBD	>90% public domain
Croatia Academy of Sciences & Arts	12 visual collections comprising 830 images	830	Images drawn from Croatian Gliptothèque and Museum of Architecture on art and history from 13 <sup>th</sup> century onwards	n/a	PDF, JPEG	Title, subtitle, creator, contributor, date, note	>90% public domain
Czech Republic National Tech	9 journals approx. 50 000 pages  150 monographs approx. 25 000 pages	159	Public content of Digital Library Kramerius – books and journals up to publication year 1911. Contents related to Czech history, culture, scholarship and society	Czech, German, Latin	Formats for presenting PDF, JPEG, JPEG2000  For archiving TIFF  Quality two alternatives 300dpi colour 24bit or	MODS. Dublin Core	public domain

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					400dpi greyscale		
Denmark University of Copenhagen and Royal Library	200,000 photos from 5/6 libraries, museums, archives	To be confirmed	Humanities, Social Science	Danish	JPEG	Mapped to ESE; metadata in Danish	public domain
University of Copenhagen and Royal Library	150,000 pages (c.30, 000 articles) on digitised journals	To be confirmed	Humanities, Social Science	Danish	JPEG, 300 dpi, grey scale and HTML	DC, on article level, dansih	public domain
University of Copenhagen and Royal Library	167.000 pages (c.25,000 items)	To be confirmed	Literature	Danish	JPEG, 300 dpi, grey scale and TEI p4	DC, danish	public domain
University of Copenhagen and Royal Library	c. 1300 digitised pages	To be confirmed	Early Modern Manscuropts	Spanish, Danish	Text and jpeg image	Danmarc2, English, Spanish	public domain
Finland The National Archives Service of Finland	2200 coats of arms, 1000 seals	3200	Europeana Heraldica, Civic Heraldry of Finland, Sweden, Norway and Denmark	14 languages: Dansk, Deutsch, Eesti, English, Español, Français, Íslenska, Italiano, Nederlands, Norsk, Nynorsk, Polski, Suomi, Svenska	Png, tif, jpg	EAD	Free
Germany BASE / University of Bielefeld	Currently there are about 1,559,000 records (out of about 37,800,000 records in total), which can reckoned to to Humanities & Social Sciences. If we additionally	Approximately 1,500,000 (including material from outside European repository	Humanities and Social Science articles As a registered OAI-service-provider, BASE is harvesting, normalizing and indexing OAI-metadata from almost every repository worldwide, which provides an OAI-interface. At the end of August 2012 there are 1,144 European repositories (worldwide 2,286) indexed by BASE. The content mostly consists of metadata	Multilingual (European languages)	Metadata (OAI-DC) and relations to files in various formats, eg. pdf html	OAI-DC, Solr-XML	IPR of journal articles defined by aggregated OAI-PMH Content Provider



	restrict this result to European repositories only, we have currently about 733,000 records.	ories)	for journal articles, preprints, working papers, dissertations, books and book chapters and other document types with predominant open access.				
Germany Central and Eastern European Online Library	40,533 articles in Political and social studies, economy, law	60800	Political and social studies, economy, law article metadata (abstract, title in original language, author, no of pages, page range, keywords, abstracts) for 60800 articles on the following subjects: political, policy studies, political digest, gender studies, sociology and social studies, anthropology, folklore, from academic publications from and about Central and South East Europe	24 languages	The articles are in PDF format	metadata is available for each article	Metadata all free for research purposes.
Germany Central and Eastern European Online Library	The C.E.E.O.L. database contains 160.000 articles in PDF format in Philology, linguistics, psychology, education	52800	Philology, linguistics, psychology, education article metadata (abstract, title in original language, author, no of pages, page range, keywords, abstracts) for 52800 articles on the following subjects: philology, linguistics, media, essays, Slavic Studies, literature, culture and society, reviews, poetry, from academic publications from and about Central and SouthEast Europe	24 languages	The articles are in PDF format,	metadata is available for each article	Metadata all free for research purposes.
Germany Central and Eastern European Online Library	The C.E.E.O.L. database contains 46,400 History, Judaic studies, philosophy, religion, fine and performing arts	46400	History, Judaic studies, philosophy, religion, fine and performing arts article metadata (abstract, title in original language, author, no of pages, page range, keywords, abstracts) for 46400 articles on the following subjects: history, history of culture, Jewish Studies, Museology and heritage studies, photography, fine arts, music, theatre, film, from academic publications from and about Central and SouthEast Europe	24 languages	The articles are in PDF format,	metadata is available for each article	Metadata all free for research purposes.
Germany Bavarian Library Consortiu		350k metadata records	Records relating to items from current digitisation projects at libraries; mostly related to ongoing Google Books digitisation	mostly European languages, Chinese	Mixture of text (in pdf) and images	MARC21 format	CC0 (for metadata)

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				Japanese			
Greece Patras	82.000 journal articles (280.000 pages), 100 books (10.000)	23,000	Literature, Arts, History. 18 selected journal titles from the collection Pleias. Digitized articles from 19th and early 20th century Greek journals representing about 66000 pages.	Greek	HTML (text), PDF, JPG (Greyscale , 300 dpi)	Dublin Core (greek)	96 % public domain 4% license
Greece Patras	Journals representing more than 25000 pages	1400	Philosophy, Sociology, Education, History, Linguistics. Digital archive of Greek scientific journals representing more than 25000 pages	Greek	HTML (text), PDF, JPG (Greyscale , 300 dpi)	Dublin Core (greek)	96 % public domain 4% license
Italy Cinecitta ' Luce	100 (or more) video files	100	Newsreels of Italian everyday life in the fifties and sixties	Italian	Any format requested, from 2k down	XML, EAD Standard, Italian	LUCE
Hungary Debrecan		6500	Civilization, Eastern Hungary, 19th century; Collection title: 19 th century periodicals from the Eastern Hungarian region 7000 pages from local periodicals of cultural, religious and historical interest	Hungarian	Black and white,; 600 dpi; jpg or pdf	MARC21 records of articles: title author parent record data, subject	Public domain
Hungary Debrecan	=	5000	<i>Civilisation, Hungary, 18th and early 19th century, Collection title: 18th century Hungarian periodicals</i> 6000 pages of 18th and early 19th century Hungarian periodicals of literary and historical interest;	Hungarian	Black and white,; 600 dpi; jpg or pdf	MARC21 records of articles in the case of some periodicals: title author parent record data, subject +DC records of periodical issues	Public domain
Hungary Debrecan	6500 records	6500	Theatre, Hungary, 19th century 2nd half; Collection title: Playbills of the Debrecen Theatre : 1862 - 1896 Digitised playbills of three decades which give insight to the cultural life	Hungarian	Black and white; 600 dpi jpg	MARC21 format: title of event date of event	Public domain

			of the Eastern Hungarian town and a valuable resource of the history of theatre in the region			publishing data of the bill series (season ticket information) Production credits physical description	
Netherlands UvA	9 records	9	Medieval manuscripts Digitised medieval (15th-16th century) manuscripts from the VU library collection. 3223 images	Dutch  Archaeological objects: English	Images:  Format : jpeg  colour  All images are high resolution converted form 300dpi tiff files  Movies: mp4, h264 encodig bitrate 150	Dublin Core  The metadata of all collections except the archaeological objects, the photographs and the fragments is also available in PICA and Marc21 format	Public domain
Netherlands UvA	18 records	18	Protestantism: Modern manuscripts Digitised modern (16th-19th century) manuscripts from the VU library collection. 3125 images	Dutch  Archaeological objects: English	Images:  Format : jpeg  colour  All images are high resolution converted form 300dpi tiff files	Dublin Core  The metadata of all collections except the archaeological objects, the photographs and the fragments is also available in PICA and Marc21 format	Public domain

					Movies: mp4, h264 encodig bitrate 150		
Netherlands UvA	6000 records	6000	History of the VU University: Historical photographs Photographs from the archive of the Historical Documentation Centre for Dutch Protestantism (1800 to the present day) (HDC) related to the history of the VU University (1870- 1980).750 (6000) images	Dutch  Archaeol ogical objects: English	Images:  Format : jpeg  colour  All images are high resolution converted form 300dpi tiff files  Movies: mp4, h264 encodig bitrate 150	Dublin Core  The metadata of all collections except the archaeological objects, the photographs and the fragments is also available in PICA and Marc21 format	Public domain
Netherlands UvA	100 records	100	History of the VU University: Historical films and videos of the VU University Amsterdam Digitised films and videos from the archive of the HDC and the VU Audio Visual Centre (1937-1980). 100 video files	Dutch  Archaeol ogical objects: English	Images:  Format : jpeg  colour  All images are high resolution converted form 300dpi tiff files  Movies:	Dublin Core  The metadata of all collections except the archaeological objects, the photographs and the fragments is also available in PICA and Marc21 format	Public domain

					mp4, h264 encodig bitrate 150		
Netherlands UvA	1266 records	1266	Geography: Map collection Collection of digitised maps, map series and globes with a focus on the Netherlands and Dutch East Indies. (16th-19th century). 4528 images	Dutch  Archaeological objects: English	Images:  Format : jpeg  colour  All images are high resolution converted form 300dpi tiff files  Movies: mp4, h264 encodig bitrate 150	Dublin Core  The metadata of all collections except the archaeological objects, the photographs and the fragments is also available in PICA and Marc21 format	Public domain
Netherlands UvA	1456 records	1456	Protestantism: Portraits of personalities from the history of Dutch Protestantism, period 1600-1900 Digitised portraits (17th-19th century).The portraits were produced using various techniques (drawing, mezzotint, engraving, lithography, photography, etc.). A small part of the collection consists of clippings from illustrated periodicals.1510 images	Dutch  Archaeological objects: English	Images:  Format : jpeg  colour  All images are high resolution converted form 300dpi tiff files  Movies: mp4, h264 encodig bitrate 150	Dublin Core  The metadata of all collections except the archaeological objects, the photographs and the fragments is also available in PICA and Marc21 format	Public domain

Netherlands UvA	300 records	300	religious culture; church books: van Noordwijk Collection Photos of church books with special emphasis on the silver decorations. 300 books: 1500 images	Dutch  Archaeological objects: English	Images:  Format : jpeg  colour  All images are high resolution converted form 300dpi tiff files  Movies: mp4, h264 encodig bitrate 150	Dublin Core  The metadata of all collections except the archaeological objects, the photographs and the fragments is also available in PICA and Marc21 format	Public domain
Netherlands UvA	295 records	295	Protestantism; religious culture; history of literature; paleography: Letters Digitised letters, (16th-18th century) with a focus on religious culture. 1889 images	Dutch  Archaeological objects: English	Images:  Format : jpeg  colour  All images are high resolution converted form 300dpi tiff files  Movies: mp4, h264 encodig bitrate 150	Dublin Core  The metadata of all collections except the archaeological objects, the photographs and the fragments is also available in PICA and Marc21 format	Public domain
Netherlands UvA	160 records	160	Manuscript fragments Digitised Medieval Manuscript	Dutch	Images:	Dublin Core	Public domain

			Fragments recovered from book bindings. 300 images, most with a transcription	Archaeological objects: English	Format: jpeg colour All images are high resolution converted form 300dpi tiff files  Movies: mp4, h264 encoding bitrate 150	The metadata of all collections except the archaeological objects, the photographs and the fragments is also available in PICA and Marc21 format	
Netherlands UvA	144 records	144	Clay tablets and other archaeological objects: van der Meer-Cools Collectie Photographs of a small collection of archaeological objects from the near east including 49 Sumerian and Akkadian clay tablets, some with transcripts and translation. 144 images, 26 pdf documents	Dutch  Archaeological objects: English	Images: Format : jpeg colour All images are high resolution converted form 300dpi tiff files  Movies: mp4, h264 encoding bitrate 150	Dublin Core  The metadata of all collections except the archaeological objects, the photographs and the fragments is also available in PICA and Marc21 format	Public domain
Netherlands UvA	2493 records	2493	Accounting; various subjects: Digitized books and journals A growing collection of digitised books and journals (19th-20th century) which includes the entire collection of the library of NIVRA	Dutch  Archaeological	Images: Format : jpeg colour	Dublin Core  The metadata of all collections except	Public domain

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			(The Netherlands Institute of Chartered Accountants). 2734 OCR'ed pdf documents (as of august 2012)	objects: English	All images are high resolution converted form 300dpi tiff files  Movies: mp4, h264 encodig bitrate 150	the archaeological objects, the photographs and the fragments is also available in PICA and Marc21 format	
Netherlands UvA	180 records	180	Transnational law; International law: Amsterdam Law Forum Student-run Open Access journal. Focus on international and transnational law (2008-) published with Open Journal Systems. 180 journal articles in pdf	Dutch  Archaeological objects: English	Images:  Format : jpeg  colour  All images are high resolution converted form 300dpi tiff files  Movies: mp4, h264 encodig bitrate 150	Dublin Core  The metadata of all collections except the archaeological objects, the photographs and the fragments is also available in PICA and Marc21 format	Public domain
Netherlands UvA	280 records	280	Open Educational Resources, weblectures and knowledge clips Educational video material currently published in iTunesU. 280 video files	Dutch  Archaeological objects: English	Images:  Format : jpeg  colour  All images are high resolution	Dublin Core  The metadata of all collections except the archaeological objects, the photographs and the fragments is	Public domain



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					converted form 300dpi tiff files	also available in PICA and Marc21 format	
					Movies: mp4, h264 encoding bitrate 150		
Netherlands Tilburg	100 research data sets and supplementary materials	100	Social Sciences Data Sets in areas such as economics, Behavioural sciences, Psychology, Socio-cultural sciences, Sociology	English	Zip, SPSS, Stata, program code, txt files, xls files, Word	DIDL-MODS, DDI	Open Access (a user might be asked to register before download however, or a user might need to ask for permission to access specific files)
Netherlands OAPEN	Approx. 1000 peer reviewed monographs, from more than 30 European academic publishers	2000	OAPEN Library: Monographs in Humanities and Social Sciences  Humanities and Social Sciences Monographs and Edited volumes from more than 30 publishers mainly from across Europe, made available in Open Access through the OAPEN Library	Multilingual (European languages)	PDF, full text	DC, available in various formats (CVS, Excell, MARC XML)	Most of the collection is available under CC licenses, a large part is freely accessible but copyright protected by the publishers
UK National Library of	180,000 pages of digitised journals (digital images and text). 200 title level records and 180,000 page level records.	200	Social Sciences and Humanities: Corpus of journals published in Wales up to 1868. Digitised copies of entire NLW corpus of pre-1868 Welsh journals (180,000 pages of digital images and ocr text from 200 titles).	All content Welsh, English or Welsh/English bilingual.	TIFF, JPEG, ALTO.	METS, MODS, DC, PREMIS, MIX, MARC21	All content pre-1868 (public domain).
UK UCL	Audio-visual longitudinal research datasets recording typical and atypical communication interactions between research subjects. Video recordings are	722	Language Sciences: conversational analysis. The CAVA	English			Registration required: access granted to any bona-fide researcher. Appropriate rights have all been cleared with research subjects

	captured as part of publicly-funded research by UCL researchers and their associates in other institutions and made available for re-use. (722 digital objects representing 250						
UK UCL	Audio-visual research data. A permanent record of 8 regional 'dialects' of British Sign Language (BSL), with recordings of at least 30 subjects per region, filmed in conversation and in interview (1304 digital objects representing 700 hours of video)	1304	Language Sciences: British Sign Language Corpus. The BSLCP repository.	Metadata : eng  Resources: sign language	60% open access. 40% registration required: collection-wide access granted to any bona-fide researcher.  Appropriate rights have all cleared with research subjects.	Uses a rich in-house descriptive metadata schema based on the ISLE MetaData Initiative (IMDI), a standard designed for language resources. Full dataset is described here: <a href="http://www.ucl.ac.uk/ls/cava/docs/1009project-report.shtml">http://www.ucl.ac.uk/ls/cava/docs/1009project-report.shtml</a>  Can be mapped to e.g. OAI_DC for export purposes.	60% open access. 40% registration required: collection-wide access granted to any bona-fide researcher.  Appropriate rights have all cleared with research subjects.
UK UCL	Digitised copies of Jeremy Bentham's manuscripts, a growing proportion of which with transcripts. In total 3183 mss	3183	Philosophy; 19th century social, political and legal thought: Jeremy Bentham manuscripts	Eng mainly, with very few	4000 manuscript folios digitised into 6000 manuscript images in jp2 format; 1200 transcripts in XML format	In-house metadata schema using extended dcterms namespace. Elements designed for scholarly retrieval by historians, but also support simple search. Full records have 40 elements. Schema can be mapped to e.g. OAI_DC for export	Open access

UK UCL	Digitised archival material: 221, 18 literary notebooks and diaries, 202 photos, 1 letter.	442	20th century literature: George Orwell collection	English	Photographs and ephemera : jp2 format  Notebooks and diaries: pdf, most with METS binding	Dublin Core	Open access
Romania University of Sibiu (unfunded)	10,000 pages scanned from the 19th century German calendars and journals, journals, old and rare books (19 books and 46 separate items) 3500 pages scanned, about 20 titles descriptions	20	Subject: Intercultural and multilingualism in Sibiu area. Cohabitation and survival through culture; Title: Brukenthal Museum - German calendars and journals Collection of periodicals from the 19th century, a collection which includes old German calendars and scientific journals and books from the same period of time.	Romanian, German – Old Gothic, Cyrillic	Pdf text, Jpg images, mixed quality	Dublin Core	Public Domain
Romania University of Sibiu (unfunded)	10,000 pages scanned from the 19th century German calendars and journals, journals, old and rare books (19 books and 46 separate items) 6500 pages scanned, about 20 books descriptions, 200 historical images	220	Subject: Intercultural and multilingualism in Sibiu area. Cohabitation and survival through culture; Title: Old romanian journals and books The oldest romanian newspapers, since 1853 has been published continuously; Cohabitation and survival of the romanians in Sibiu area, through the restoration and the independence of the Transylvanian church life.	Romanian, German – Old Gothic, Cyrillic	Pdf text, Jpg images, mixed quality	Dublin Core	Public Domain
Spain, Portugal Fundación Dialnet	3182 journal articles (3072 with full-text; 721 with resume)	2115	Local ethnographic and anthropological studies Articles coming from regional research journals. Regarding to ethnographic and anthropological studies.	Spanish (and 112 articles in English)	Digital	Metadata available. Formats: MARCXML, MARC21	Fundación Dialnet has the right to transform, copy and communicate publicly the complete texts of the articles
Spain,	3182 journal	748	Education and Philological studies	Spanish	Digital	Metadata	Fundación Dialnet has the right to

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Portugal Fundación Dialnet	articles (3072 with full-text; 721 with resume)		Articles from research journals: Cuadernos de investigación filológica, Journal of English Studies and Contextos educativos Revista de educación	(and 112 articles in English)		available. Formats: MARCXML, MARC21	transform, copy and communicate publicly the complete texts of the articles
Spain, Portugal Fundación Dialnet	3182 journal articles (3072 with full-text; 721 with resume) 618 records	618	Historic and geographic studies Articles from research journals: Brocar: Cuadernos de investigación histórica, Cuadernos de investigación geográfica and Iberia: Revista de la Antigüedad	Spanish (and 112 articles in English)	Digital	Metadata available. Formats: MARCXML, MARC21	Fundación Dialnet has the right to transform, copy and communicate publicly the complete texts of the articles
Sweden CESSDA	25,000 research		Europeana data sets drawn from the full spectrum of social sciences (and humanities) held in national repositories		Mostly, spreadsheets and other databases	DDI	Metadata all free for research purposes.
UK University of Edinburgh	5,000+ digital objects, of various types such as maps, photos, drawings, etc. 5,000+ records	5000	Specialized collections Architectural Drawings (286 images); Ars Anatomica (550 images); Charting The Nation (407 owned by Edinburgh); Hill & Adamson (700); Laing	n/a	TIFF masters with JPEG derivatives	Spectrum standard (deep cataloguing) Public metadata template based on VRA Crosswalks to DC	Much of the collection is freely available online, with reproduction rights for non-commercial study and academic research
UK University of Edinburgh	2,500+ digital objects, of various types such as maps, photos, drawings, etc. 2,500+ records	2500	Folklore collections Fine Art (500 high quality images); Walter Scott (1070 images); Scottish Studies (44); University of Edinburgh	English	TIFF masters with JPEG derivatives	Spectrum standard (deep cataloguing) Public metadata template based on VRA Crosswalks to DC	Much of the collection is freely available online, with reproduction rights for non-commercial study and academic research

**Table 0.b – Content from Existing Partners**

In addition to the new content, the Europeana Cloud will work with the institutions below (who already have submitted metadata to Europeana) to provide digitised content for the project. They are not funded within the project.

Provider	Quantity and Type	Subject matter (topic or theme that content is about).	Language	Format	Existing Metadata	IPR
Hispana	1,007,425 Text	Books, Photographic images of Spanish civil war, newspaper articles	Spanish	PDF-JPEG-TEI	Europeana Semantic Elements Spanish	117,63 in Public Domain
Nationaal Archief	494,277 Image except for 23 Text	Collection of photographs - mostly WW2 Netherlands	Dutch	PDF-JPEG-PNG	Europeana Semantic Elements Dutch	Free Access
Jewish Historical Intitute, Warsaw	219,848 Text	Official documents, census records & correspondence	Polish	PDF-JPEG-TEI	Europeana Semantic Elements Polish	Free Access
Swedish Open Cultural Heritage	116,739 Image	Photographic collection of cultural history.	Swedish	PDF-JPEG-PNG-TIFF	Europeana Semantic Elements Swedish	Unshown
Erfgoed Brabant	111,664 Image	Paintings, photographs	Dutch	PDF-JPEG-PNG-TIFF	Europeana Semantic Elements Dutch	Unshown
Institut National de l'Audiovisuel	101,356 Videos	Collection of videos from National Institute of Audiovisual	French	MP4-MOV-AVI-WMV	Europeana Semantic Elements French	Unshown
Swedish Open Cultural Heritage	99,675 Image 93,406/ Text 6,269	Photographs of churches and places of historical interest	Swedish	PDF-JPEG-PNG-TIFF PDF-JPEG-TEI	Europeana Semantic Elements Swedish	1,383 in Public Domain
Hungarian Open Air Museum	93,505 Image 92,311/ Text 1,194	Books, poems, and pictures	Hungarian	PDF-JPEG-PNG-TIFF PDF-JPEG-TEI	Europeana Semantic Elements Hungarian	Unshown
Universiteitsbibliotheek Gent	92,474 Text	Text documents	Dutch	PDF-JPEG-TEI	Europeana Semantic Elements Dutch	Unshown
Lusto - Suomen Metsamuseo	79,411 Image	Photographs of Finnish life	Finnish	PDF-JPEG-PNG-TIFF	Europeana Semantic Elements Finnish	Unshown

Universitätsbibliothek JCS Frankfurt am Main	74,399 Text	Collection of journals regarding Jewish studies	German	PDF-JPEG-TEI	Europeana Semantic Elements German	Public Domain
Deutsches Filminstitut - DIF	69,459 Image 67,370/ Text 1,150/ Video 939	Videos, film stills and clips and videos, production notes, directions and materials	German	PDF-JPEG-PNG-TIFF PDF-JPEG-TEI MP4-MOV-AVI-WMV	Europeana Semantic Elements German	Free Access
Swedish Open Cultural Heritage	65,496 Image	Cultural heritage photographs	Swedish	PDF-JPEG-PNG-TIFF	Europeana Semantic Elements Swedish	Unshown
Narodna in univerzitetna knjižnica	58,982 Text	Collection of newspapers	Slovene	PDF-JPEG-TEI	Europeana Semantic Elements Slovene	Unshown
Across Limits	51,955 Image 50,802/ Text 1,153	Collection of photographs, mostly of churches	Maltese	PDF-JPEG-PNG-TIFF PDF-JPEG-TEI	Europeana Semantic Elements Maltese	Free Access
Bibliothèque Nationale de Luxembourg	47,987 Text	Collection of newspapers	French	PDF-JPEG-TEI	Europeana Semantic Elements French	38,108 in Public Domain
Various Museums	43,664 Image	Varied collection	Slovak	PDF-JPEG-PNG-TIFF	Europeana Semantic Elements Slovak	Unshown
University of Patras/ Library and Information Center	40,366 Text	Articles	Greek	PDF-JPEG-TEI	Europeana Semantic Elements Greek	Unshown
Eesti Rahvusraamatukogu	38,866 Image 468/ Text 38,398	Office reports, journal articles, papers, books, maps	Estonian	PDF-JPEG-PNG-TIFF PDF-JPEG-TEI	Europeana Semantic Elements Estonian	Unshown
Archivio di Stato di Venezia	38,597 Text	Documentary archive	Italian	PDF-JPEG-TEI	Europeana Semantic Elements Italian	Free Access
Universiteitsbibliotheek Gent	37,444 Image	Still images of churches	Dutch	PDF-JPEG-PNG-TIFF	Europeana Semantic Elements Dutch	Unshown
Filmoteka Narodowa	35,237 Image	Still images	Polish	PDF-JPEG-PNG-TIFF	Europeana Semantic Elements Polish	Free Access
National Library of Ireland	33,651 Image	Photographs and still images of churches	English	PDF-JPEG-PNG-TIFF	Europeana Semantic Elements English	Unshown

Austrian National Library	30,938 Image	Photographs	German	PDF-JPEG-PNG-TIFF	Europeana Semantic Elements German	Free Access
International Center for Information Management Systems and Services	30,055 Image	Architectural images	Polish	PDF-JPEG-PNG-TIFF	Europeana Semantic Elements Polish	Unshown
Europeana 1914-1918	44,869 Image 40,776/ Text 4,069/ Sound 13/ Video 11	Postcards, letters, photographs, memorabilia from WW1	Various	PDF-JPEG-PNG-TIFF PDF-JPEG-TEI MP4-MOV-AVI-WMV MP3-WAV	Europeana Semantic Elements Various	CC BY-SA and CC0
Bodleian Libraries, Oxford University	24,411 Text	Collection of medieval and renaissance books, bibles, texts and manuscripts	English	PDF-JPEG-TEI	Europeana Semantic Elements English	Free Access
Biblioteca Nacional de Espana	23,547 Image 9,419/ Text 14,128	Manuscripts	Spanish	PDF-JPEG-PNG-TIFF PDF-JPEG-TEI	Europeana Semantic Elements Spanish	Unshown
Регионална библиотека ПЕНЧО СЛАВЕЙКОВ - Варна	22,821 Image 2,203/ Text 20,618	Pictures, portraits, engravings	Bulgarian	PDF-JPEG-PNG-TIFF PDF-JPEG-TEI	Europeana Semantic Elements Bulgarian	Unshown
Ministrstvo za kulturo, Direktorat za kulturno dediscino, INDOK center	19,679 Image 16,963/ Text 2,716	Photographs	Slovene	PDF-JPEG-PNG-TIFF PDF-JPEG-TEI	Europeana Semantic Elements Slovene	Unshown
Various Museums	19,662 Image	Objects - mostly naval theme	Finnish	PDF-JPEG-PNG-TIFF	Europeana Semantic Elements Finnish	Unshown
IRCAM - Institut de Recherche et Coordination Acoustique/Musique	19,455 Image 48/ Text 12,979/ Sound 6,385/ Video 43	Various music, scores, notations	French	PDF-JPEG-PNG-TIFF PDF-JPEG-TEI MP4-MOV-AVI-WMV MP3-WAV	Europeana Semantic Elements French	Unshown
National Library of Latvia	18,536 Image	Postcards, photographs	Latvian	PDF-JPEG-PNG-TIFF	Europeana Semantic Elements Latvian	Free Access
CIMEC - Institutul de Memorie Culturala	16,258 Image 16,075/ Text 183	Photographs, objects, coins	Romanian	PDF-JPEG-PNG-TIFF PDF-JPEG-TEI	Europeana Semantic Elements Romanian	Unshown

Slovensk e narodne muzeum	15,104 Image	Art craft, coins, objects	Slovak	PDF-JPEG- PNG-TIFF	Europeana Semantic Elements Slovak	Free Access
Jewish Museum London	14,836 Image 6,881/ Text 7,955	Etchings and items from Jewish History museum	English	PDF-JPEG- PNG-TIFF PDF-JPEG- TEI	Europeana Semantic Elements English	Free Access
Various Universities and Institutes	13900 Image 7,201/ Text 6,513/ Video 162/ Sound 24	Collection of music	German	PDF-JPEG- PNG-TIFF PDF-JPEG- TEI MP4-MOV- AVI-WMV MP3-WAV	Europeana Semantic Elements German	1,214 in Public Domain
Centre Francais des Musiques Juives	14,045 Sound	Music	French	MP3-WAV	Europeana Semantic Elements French	718 in Public Domain
Joods Historisch Museum, Amsterdam	13,75 Image	Objects, maps, postcards, photos	Dutch	PDF-JPEG- PNG-TIFF	Europeana Semantic Elements Dutch	Free Access
Bekes Megyei Tudashaz es Konyvtar	12,024 Image 10,154/ Text 1,836/ Sound 34	Photographs, documents sound files	Hungarian	PDF-JPEG- PNG-TIFF PDF-JPEG- TEI MP3-WAV	Europeana Semantic Elements Hungarian	Unshown
National and University Library of Slovenia	11,298 Text	Text materials, documents	Slovene	PDF-JPEG- TEI	Europeana Semantic Elements Slovene	Unshown
National Library of the Czech Republic	10,849 Text	Monographs	Czech	PDF-JPEG- TEI	Europeana Semantic Elements Czech	Unshown
Ateneumin taidemuseo	10,814 Image	Art collection	Finnish	PDF-JPEG- PNG-TIFF	Europeana Semantic Elements Finnish	Unshown
Accademia Nazionale di Santa Cecilia	10,604 Sound	Sound recordings	Italian	MP3-WAV	Europeana Semantic Elements Italian	Restricted Access
Centre Virtuel de la Connaissance sur l'Europe	10,227 Text	Official documents, legal papers, discussions, transcripts	French	PDF-JPEG- TEI	Europeana Semantic Elements French	2,275 in Public Domain
National Museum of Czech Republic	9,793 Image 4,335/ Text 5,458	Various collection	Czech	PDF-JPEG- PNG-TIFF PDF-JPEG- TEI	Europeana Semantic Elements Czech	Unshown



Koninklijke Bibliotheek	9,484 Text	Books	Dutch	PDF-JPEG-TEI	Europeana Semantic Elements Dutch	Public Domain
Biblioteca de Catalunya	8,777 Image 8,773/ Text 4	Photographs	Catalan	PDF-JPEG-PNG-TIFF PDF-JPEG-TEI	Europeana Semantic Elements Catalan	Unshown
La Cinematheque Francaise	8,201 Image 7,913/ Text 288	Film collection	French	PDF-JPEG-PNG-TIFF PDF-JPEG-TEI	Europeana Semantic Elements French	Free Access
CIMEC - Institutul de Memorie Culturala	8,155 Image	Texts	Romanian	PDF-JPEG-PNG-TIFF	Europeana Semantic Elements Romanian	Unshown
Koninklijk Instituut voor het Kunstpatrimonium (KIK) Brussels	7,988 Image	Photograph collection	Dutch	PDF-JPEG-PNG-TIFF	Europeana Semantic Elements Dutch	Free Access
Vlaamse Kunstcollectie	7,914 Image	Photograph collection	Dutch	PDF-JPEG-PNG-TIFF	Europeana Semantic Elements Dutch	Unshown
DIZI	7,731 Image	Collection of photography, posters	Lithuanian	PDF-JPEG-PNG-TIFF	Europeana Semantic Elements Lithuanian	Unshown
Biblioteca Nacional de Portugal	7,671 Image 5,700/ Text 1,901	Documents, maps	Portuguese	PDF-JPEG-PNG-TIFF PDF-JPEG-TEI	Europeana Semantic Elements Portuguese	Free Access
Eesti Rahvusraamatukogu	7,047 Image 7,003/ Text 44	Photographs, texts books	Estonian	PDF-JPEG-PNG-TIFF PDF-JPEG-TEI	Europeana Semantic Elements Estonian	Unshown
The Great War Archive, Oxford University	6,534 Image 6,342/ Text 161/ Sound 31	Great war collection	English	PDF-JPEG-PNG-TIFF PDF-JPEG-TEI MP3-WAV	Europeana Semantic Elements English	Free Access
Universitätsbibliothek JCS Frankfurt am Main	6,316 Text	Texts, publications, newspapers, journals, posters	German	PDF-JPEG-TEI	Europeana Semantic Elements German	Public Domain
Studio - Παράλληλο Κύκλωμα	5,943 Image 2,298/ Text 2,827/ Video 818	Books and texts from books	Greek	PDF-JPEG-PNG-TIFF PDF-JPEG-TEI MP4-MOV-AVI-WMV	Europeana Semantic Elements Greek	Unshown
Cineteca del Comune di Bologna	5,929 Text 5,774/ Video 155	Film stills and videos	Italian	PDF-JPEG-TEI MP4-MOV-AVI-WMV	Europeana Semantic Elements Italian	Free Access

Roskilde lokalhistoriske Arkiv	5,853 Image 5,612/ Text 241	Photos	Danish	PDF-JPEG- PNG-TIFF PDF-JPEG- TEI	Europeana Semantic Elements Danish	Free Access
Austrian National Library	5,029 Text	Newspapers	German	PDF-JPEG- TEI	Europeana Semantic Elements German	Unshown
RNOD Portugal-Registro Nacional de Objectos Digitais	4,288 Image 2,768/ Text 1,520	Books, cartography	Portuguese	PDF-JPEG- PNG-TIFF PDF-JPEG- TEI	Europeana Semantic Elements Portuguese	Free Access
Hungarian Jewish Archives	4,148 Image 1,291/ Text 2,857	Jewish archives	Hungarian	PDF-JPEG- PNG-TIFF PDF-JPEG- TEI	Europeana Semantic Elements Hungarian	Free Access
Fundacao Portuguesa das Comunicacoes	3,576 Image	Texts, letters, documents and newspapers	Portuguese	PDF-JPEG- PNG-TIFF	Europeana Semantic Elements Portuguese	Free Access
CIMEC - Institutul de Memorie Culturala	3,298 Image	Still images, objects	Romanian	PDF-JPEG- PNG-TIFF	Europeana Semantic Elements Romanian	Unshown
Bodleian Libraries, Oxford University	3,243 Text	Manuscripts	English	PDF-JPEG- TEI	Europeana Semantic Elements English	Free Access
askaboutireland.ie	3,236 Image	Still images and photographs	English	PDF-JPEG- PNG-TIFF	Europeana Semantic Elements English	Unshown
Moravska galerie v Brne	3,209 Image	Random collection of objects, photographs, still images	Czech	PDF-JPEG- PNG-TIFF	Europeana Semantic Elements Czech	Unshown
Swedish Open Cultural Heritage	3,175 Text	Books and texts	Swedish	PDF-JPEG- TEI	Europeana Semantic Elements Swedish	Unshown
Fundacao Calouste Gulbenkian-Portugal	2,711 Image 1,910/ Text 626/ Sound 175	Monographs and monuments	Portuguese	PDF-JPEG- PNG-TIFF PDF-JPEG- TEI MP3-WAV	Europeana Semantic Elements Portuguese	Unshown
Svenska litteratursallskapet i Finland	2,676 Text	Manuscripts	Finnish	PDF-JPEG- TEI	Europeana Semantic Elements Finnish	Unshown
Centre Virtuel de la Connaissance sur l'Europe	2,469 Image	Photos	French	PDF-JPEG- PNG-TIFF	Europeana Semantic Elements French	18 in Public Domain

Irish Virtual Research Library and Archive	2,373 Text	Texts and essays	English	PDF-JPEG-TEI	Europeana Semantic Elements English	Unshown
Akadem	1,849 Video	Videos	French	MP4-MOV-AVI-WMV	Europeana Semantic Elements French	Free Access
Various Romanian Institutes	8,141 Image 3,120/ Text 4,876/ Sound 140/ Video 5	Manuscripts, texts	Romanian	PDF-JPEG-PNG-TIFF PDF-JPEG-TEI MP4-MOV-AVI-WMV MP3-WAV	Europeana Semantic Elements Romanian	Unshown
TVC	1,654 Video	Photography	Spanish	MP4-MOV-AVI-WMV	Europeana Semantic Elements Spanish	Free Access
The British Library	1,565 Sound	Recordings	English	MP3-WAV	Europeana Semantic Elements English	Unshown
The National Library of Denmark and Copenhagen University Library	1,561 Image	Musical scores	Danish	PDF-JPEG-PNG-TIFF	Europeana Semantic Elements Danish	Unshown
Centre Virtuel de la Connaissance sur l'Europe	1,323 Video	Videos	French	MP4-MOV-AVI-WMV	Europeana Semantic Elements French	4 in Public Domain
ORF Austrian Broadcasting Corporation	1,246 Video	Videos	German	MP4-MOV-AVI-WMV	Europeana Semantic Elements German	Free Access
RTBF-Radio Television Belge Francophone	1,236 Video 1,195/ Sound 22/ Image 18/ Text 1	Photos, sounds	French	PDF-JPEG-PNG-TIFF PDF-JPEG-TEI MP4-MOV-AVI-WMV MP3-WAV	Europeana Semantic Elements French	Free Access
The National Library of Denmark and Copenhagen University Library	2,424 Text	Texts	Danish	PDF-JPEG-TEI	Europeana Semantic Elements Danish	CC BY-NC-ND
Niedersächsische Staats- und Universitätsbibliothek Göttingen	1,125 Text	Texts	German	PDF-JPEG-TEI	Europeana Semantic Elements German	Unshown
Instituto dos Museus e da Conservação	1,082 Image	Objects, engravings	Portuguese	PDF-JPEG-PNG-TIFF	Europeana Semantic Elements Portuguese	Free Access

Heritage Malta	978 Image	Paintings	Maltese	PDF-JPEG-PNG-TIFF	Europeana Semantic Elements Maltese	Unshown
HeNAA-Hellenic National Audiovisual Archive	978 Video	Videos	Greek	MP4-MOV-AVI-WMV	Europeana Semantic Elements Greek	Free Access
Cinecitta Luce	875 Video 450/ Image 425	Photographs	Italian	MP4-MOV-AVI-WMV PDF-JPEG- PNG-TIFF	Europeana Semantic Elements French	Free Access
Centre Virtuel de la Connaissance sur l'Europe	839 Image	Caricatures	French	PDF-JPEG-PNG-TIFF	Europeana Semantic Elements Italian	Free Access
Centre Virtuel de la Connaissance sur l'Europe	787 Text	Texts	French	PDF-JPEG-TEI	Europeana Semantic Elements French	37 in Public Domain
Kansallinen Audiovisuaalinen Arkisto	699 Video	Videos	Finnish	MP4-MOV-AVI-WMV	Europeana Semantic Elements Finnish	Free Access
Vlaamse Radio- en Televisieomroep	623 Video	Videos	Dutch	MP4-MOV-AVI-WMV	Europeana Semantic Elements Dutch	Free Access and Unknown
Raidió Teilifís Éireann-RTE	599 Video	Videos	English	MP4-MOV-AVI-WMV	Europeana Semantic Elements English	Free Access
Czech Television	534 Video	Videos	Czech	MP4-MOV-AVI-WMV	Europeana Semantic Elements Czech	Free Access
Ototext	502 Image	Various objects	Bulgarian	PDF-JPEG-PNG-TIFF	Europeana Semantic Elements Bulgarian	CC BY
Polish Television	465 Video	Videos	Polish	MP4-MOV-AVI-WMV	Europeana Semantic Elements Polish	Free Access
Romanian Television	450 Video	Videos	Romanian	MP4-MOV-AVI-WMV	Europeana Semantic Elements Romanian	Free Access
Centre Virtuel de la Connaissance sur l'Europe	444 Text	Legal documents	French	PDF-JPEG-TEI	Europeana Semantic Elements French	394 in Public Domain

The Wellcome Library	400 Text 399/ Image 1	Research journals	English	PDF-JPEG- PNG-TIFF PDF-JPEG- TEI	Europeana Semantic Elements English	CC BY-NC- SA/ CC BY- NC/ CC BY- NC-ND
Irish Manuscripts Commission	386 Sound	Recordings	English	MP3-WAV	Europeana Semantic Elements English	CC BY-NC
Biblioteca de Catalunya	319 Text	Political documents	Catalan	PDF-JPEG- TEI	Europeana Semantic Elements Catalan	Public Domain
Museum of Greek Folk Art	276 Image	Images, costumes, objects and items from Greek folk	Greek	PDF-JPEG- PNG-TIFF	Europeana Semantic Elements Greek	Unshown
eye Film Instituut Nederland	261 Video	Videos	Dutch	MP4-MOV- AVI-WMV	Europeana Semantic Elements Dutch	Free Access
The National Library of Denmark and Copenhagen University Library	193 Text	Manuscripts	Danish	PDF-JPEG- TEI	Europeana Semantic Elements Danish	Unshown
Irish Manuscripts Commission	186 Image	Manuscripts	English	PDF-JPEG- PNG-TIFF	Europeana Semantic Elements English	Unshown
Biblioteca Palatina di Parma - CulturalItalia	170 Text	Bible collection	Italian	PDF-JPEG- TEI	Europeana Semantic Elements Italian	Free Access
Academy of Athens - Research Center for the Study of Modern Greek History	158 Text	Manuscripts	Greek	PDF-JPEG- TEI	Europeana Semantic Elements Greek	Unshown
Irish Virtual Research Library and Archive	158 Text	Texts - journal articles	English	PDF-JPEG- TEI	Europeana Semantic Elements English	Unshown
Biblioteca de Catalunya	127 Text	Catholic religious texts	Catalan	PDF-JPEG- TEI	Europeana Semantic Elements Catalan	Public Domain
Biblioteca de Catalunya	105 Text	Academic journals/texts	Catalan	PDF-JPEG- TEI	Europeana Semantic Elements Catalan	Free Access
DW- WORLD.DE- Deutsche Welle	50 Video	Sociological video	German	MP4-MOV- AVI-WMV	Europeana Semantic Elements German	Unshown

*ii) IPR issues*

*Elaborate on IPR issues and how they will be addressed during the project. The analysis should cover*

- *IPR issues of the underlying content that is to be made available (input)*
- *IPR issues related to the project outcome including IPR clearing methods for content and tools (output)*

Much of the content that is being ingested for reuse is public domain or licensed for public use. Europeana Foundation will use its normal ingestion processes to ensure that all the content made available during the project conforms to the Europeana Data Agreement and is reusable for researchers under Europeana Research and within the Europeana Cloud.

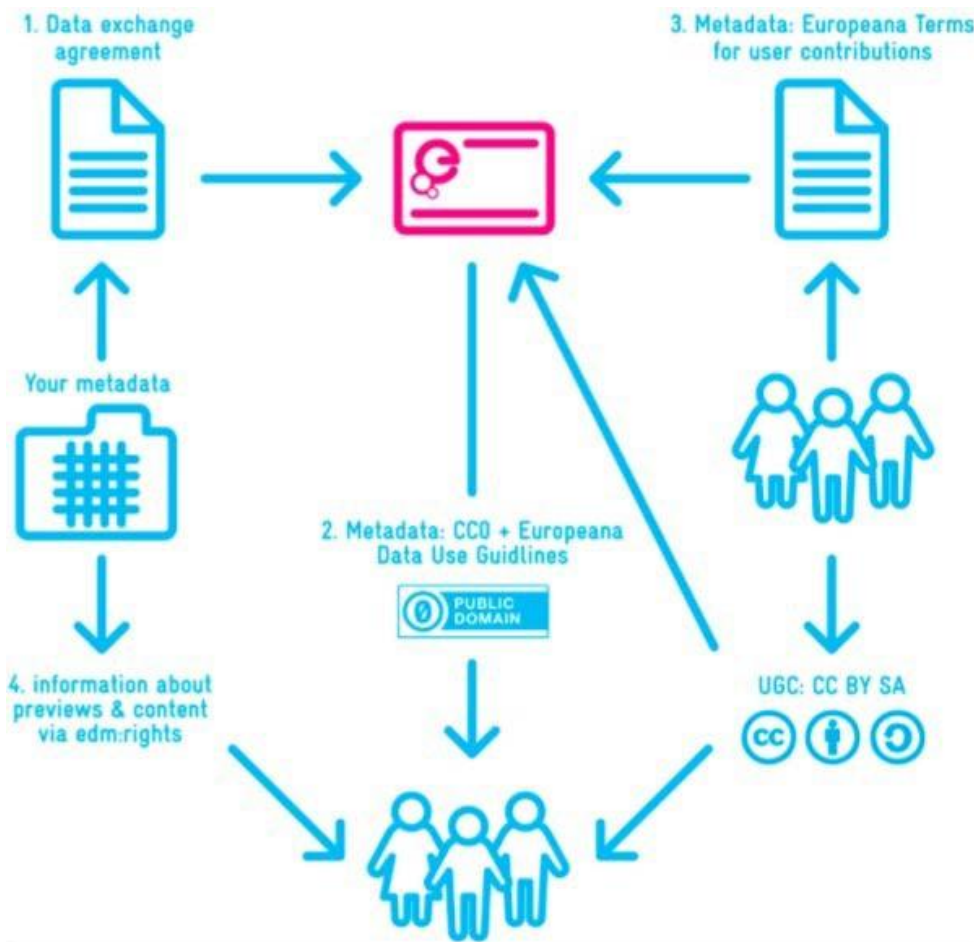
These ingestion processes require:

- That the contributing partner has cleared all rights before ingestion work begins.
- An initial quality check to determine if the license applied to the work or object is correct
- An insistence on the use of one of the 7 creative commons licenses and/or one of the 2 Europeana licenses
- The mandatory rights labelling element in the Europeana Semantic Elements schema is completed.

Providers will be helped to do this under task 4.1.2, workshops and 4.2.3, content ingestion, by the Operations team in Europeana

*Extending the permissions*

The Europeana Foundation has a Europeana Licensing Framework (see diagram below). This deals with the relationship that Europeana has with the aggregators and providers of content and the users of the content and tools and services.



*The Europeana Licencing Framework*

To date however only the conditions related to metadata and previews are dealt with in the Europeana Data Exchange agreement. One of the major outcomes of the project will therefore be to develop the **Europeana Content Re-use Framework** to allow content providers to make content available for specified re-use scenarios. While the current Europeana Licensing Framework (including the Europeana Data Exchange Agreement) regulates access to metadata and thumbnail images on Europeana, there is currently no framework governing access and re-use conditions of the content items themselves. The Europeana Content Re-Use Framework implemented by Europeana Cloud will provide a permission management infrastructure allowing content partners to communicate the conditions for the commercial re-use of their content: It will enable content providers to opt-in for giving access to rich content and metadata for a range of re-use scenarios under conditions specified by them

Providing metadata under a CC0 license is a base requirement to be part of Europeana. The provision of content however, requires Europeana to be able to manage different agreements on its reuse. It is unlikely that Europeana will put in place a rights management system but it will require that providers to label their content with a set of standardised licenses and provide the tools to be able to separate out this content for different reuse scenarios. These reuse scenarios will be determined in the workshops held under task 5.3. Thus the Europeana License Framework will be extended under this project to be able to deal with content as well as metadata.

In fact, the content that is being submitted for the project (Table 0.a) is all cleared for use for Research and the Europeana Aggregators and Content Providers (Table 0.b) will be asked to submit content under a Research Reuse agreement.

The use of cultural heritage content for research purposes is fairly uncontroversial and will help encourage many of the current providers of metadata to Europeana allow such a level of reuse. Working on the conditions, legal, emotional and technological, to reuse content for research, will act as a bridge towards finding ways of permitting reuse for commercial reasons.

This extension to the Europeana Licensing Framework will be worked out in task 5.3 together with the aggregators and content providers. The team undertaking this created the Framework itself, the DEA and worked on the buy in to achieve its take up by providers.

### *Output*

In creating the model that allows machine readable transference of rights for Research purposes, work will also be done to be able to permit willing providers to release their content, under various conditions, for wider reuse.

Europeana will make some changes in the ingestion software to be able to control the output and ensure that content that is only intended to be used for research purposes is secure.

The APIs developed under WP3 will reflect the conditions agreed under the extended Europeana Licensing Framework.

All other project outputs – reports, articles, conference papers and tools – developed as part of the project will be available in the public domain. Where appropriate, an Open Source or Creative Commons licence will be attached to them to underline the fact that these materials are for general public use/re-use.

### *iii) Multilingual and/or multicultural aspects*

*Describe how the envisaged solutions to make the content more accessible, usable and exploitable will enhance multicultural and/or multilingual use of the underlying content. (e.g. through cross-lingual search and retrieval)*

As the interface for the Europeana Research portal will be based on the existing European Library (TEL) website, it will make use of the TEL language policy outlined below.

“The multilingual and multicultural nature of The European Library is reflected by its content providers; the 48 CENL members, spanning a wide range of languages and character sets. By ensuring that the data and search mechanisms in the partner libraries are Unicode-compatible, The European Library facilitates access to its content no matter which language is searched in. A successful effort has been made to tailor the entire infrastructure of The European Library to Unicode/UTF-8 as the default character set.

Currently the user interface of The European Library is offered in 36 major European languages, enabling users of Europe to interact with The European Library no matter what their native languages are. Furthermore, The European Library provides 28 virtual keyboards for entering characters not supported by the native keyboard of the user. The European Library has invested significantly in its



multilingual accessibility by providing to its end users the descriptions of its 400+ collections in 36 languages.

Over its 5 year existence, The European Library has established wide multilingual access to scientific and cultural collections across Europe. In essence, all the languages and locales of the Europeana Libraries partners are already represented in The European Library. In addition, The European Library office has actively participated in cross- and multilingual search research activities; such as implementing a cross-lingual searching prototype based on the technologies developed in the CACAO project. In addition, The European Library works closely with the Multilingual Access to Subjects (MACS) project team, where a prototype multilingual search interface using the MACS linked subject headings has already been implemented.”

## **B2.2. Long term viability**

*Describe how the consortium intends to reach viability, sustainability and scalability after the end of the project and the Community funding. Where appropriate, include an exploitation plan for the service describing the funding flow which will support its long term viability.*

As mentioned in the Project Profile, there will be two key outputs from this project – the Europeana Cloud infrastructure and secondly the Europeana Research platform, with associated tools and services for researchers in the humanities and social sciences.

Ensuring that such outcomes survive and can scale up, and that others aggregators will share content within this infrastructure, is an essential element of the project. At the completion of the project, the cloud will contain metadata and content drawn from The European Library, the Polish Digital Library Foundation and Europeana itself. The very advantages that Europeana Cloud can bring are predicated on the ability to make it a pan-European infrastructure, with the potential to involve all European aggregators.

Work Packages 2 and 5 have particular importance for this. A challenge for the project is developing a system that is sensitive to the needs of the broader Europeana network. The proposed cloud infrastructure brings with it a range of IPR, economic and strategic issues. Such issues will be of the utmost relevance to the aggregators that form the Europeana Network.

WPs 2 and 5 are therefore designed to address these issues, ensuring that Europeana Cloud is developed in a way that responds to short, medium and long-term requirements, not just of the project partners but the wider Europeana network. An intense round of requirements-gathering will take place at the start of WP2. This will ensure that the technical foundations are secure; again, this will take in the needs of not just the project partners but the larger Europeana network. It is also proposed to create a Cloud Coordinators Group, this will involve other cloud projects funded by this EU stream, as well as the Europeana Creative project led by the National Library of Austria, and to explore the opportunities for synergy between the technical systems and business models being created. This will also feed into WP2 and 5.

WP5 will follow a similar path: considering the strategic, legal and economic impacts of Europeana Cloud and ensuring that all partners in the Network can benefit from these advantages. To achieve success, the Europeana Cloud project has to deliberate with the Europeana Network, build their trust, and all within the umbrella of a sustainable business model. A number of core questions need to be answered:

What are the security issues that need to be addressed? How does one protect the cloud from unauthorised entry? How are the required levels of reliability built into the system? How does one create trust amongst providers? What is the impact of national and EU legal frameworks? How does one configure the system to achieve the best cost efficiencies? What is the level of contribution different members must make? What are the maximum levels of usage that a member may make?

The experience of the Europeana Foundation staff will use its considerable professional expertise to tackle aspects such as business modelling, partnership development and community engagement. The partners in WP5 will create the crucial outputs in response to these issues. This will include requirements for prospective participants, a set of operating principles and guidelines for current members and governance structure for Europeana Cloud. Other partners have been added to enrich this knowledge, with particular respect to the legal issues. Exploration of the legal environment will provide the project with the means of adapting the current Europeana Data Exchange Agreement, thus ensuring the correct legal framework for the cloud to prosper.

In both WPs, parties external to Europeana will act as ‘critical friends’ to the project. In WP2 staff from the Istituto di Scienza e Tecnologie dell'Informazione will apply their considerable understanding of the technologies underpinning digital libraries; in WP5, Kennisland will bring their wealth of expertise in understanding the legal and economic contexts of digital services for cultural heritage to bear.

At the end of the project, an exploitation plan, comprising a business plan and a timetable for its execution, will be produced. This will provide the direction for Europeana Cloud.

### B.2.3. Wider deployment and use

*This section should describe how the project will facilitate wider deployment and use: how the envisaged solution will be maintained and should / could be further developed or replicated across Europe; how the experience gained with the project can be disseminated and shared with other interested parties by activities which will be implemented within the project such as:*

- *networking (networking capacity of the consortium and intended contribution towards clustering activities)*
- *dissemination & awareness activities (including events and meetings)*

#### Networking Capacity

While Europeana Cloud has a fixed set of partners, the quantity of interested parties is much higher. A crucial aspect of this Best Practice Network is the ability to engage with the wider set of aggregators, and potentially even content providers. Building consensus over the development of Europeana Cloud after the project completes will be a key indicator of its success.

In particular, the Europeana Cloud project will make best use of the Europeana Network (formerly known as the Council of Content Providers and Aggregators). The Europeana Network is a continent-wide forum which permits the views of aggregators and content providers to be reflected. As well as including the aggregators who feed content directly to Europeana, it includes archives, galleries and museums and the audio-visual sector who provide the basis for these domain or thematic aggregations. At time of writing, it has 420 members.

The Network is well experienced in dealing with the issues. Previous working groups have dealt with the following issues:

- The economic sustainability of aggregation and syndication of digitised content in the cultural sphere
- Enhancing user-engagement in Europeana
- Providing an ethical policy for Europeana
- Removing the technical obstacles to participating and contributing to Europeana
- Removing the legal barriers to participating and contributing to Europeana

All of these issues are pertinent for Europeana Cloud, but those relating to financial sustainability, technical obstacles and legal barriers are of specific interest. For content providers and aggregators sharing metadata and content via the Europeana Cloud infrastructure offers benefits, but the potential risks - particularly over security and sharing content within a shared space that operates across national boundaries - need to be addressed and mitigated. The expertise of the Europeana Network, and its ability to provide feedback on the opinions of the whole range of European content providers, will be in crucial in building consensus on the nature and direction of Europeana Cloud.

Engagement will be via the yearly annual meetings of the Network, the meetings of the six elected officers of the Europeana Network who sit on the Europeana Board, and regular communication. In consultation with the Europeana Foundation, the Europeana Network is currently in the process of designing Task Forces to provide specific input to Europeana; such Task Forces “deal with issues and problems from across the field; they reflect the opinion and development of content providers and aggregators and they respond to strategic questions and key opportunities.” As part of the core work of Europeana, a Task Force will be constructed to provide a regular point of contact to discuss Europeana Cloud.

But the Europeana Network will not be the sole channel for dissemination concerning the Europeana Cloud. The Europeana Foundation (which includes not only Europeana but also The European Library), CERL (Consortium of European Research Libraries) and LIBER (Ligue des Bibliothèques Européennes de Recherche) all have powerful and extensive networks throughout Europe. LIBER

which comprises over 400 research libraries in Europe) and CERL (connecting around 200 libraries with significant heritage collections) will use their established dissemination channels to promote the project and gather feedback on the wider impact of this new technical infrastructure.

Beyond this the project will also look to share its explorations and findings within the global network of digital libraries, most specifically with the nascent Digital Public Library of America.

The Europeana Cloud project also concerns itself with garnering greater use of Europeana's service amongst the humanities and social sciences communities. Again LIBER and CERL will have a role here. In being able to disseminate information to subject librarians, they provide an ideal communications gateway to the researchers with whom such librarians liaise. Equally, The European Library and Europeana teams have committed communication units that have several years experience in drawing users to the site. New dissemination events will be created for the new tools and services, as Europeana Cloud becomes folded into communication engagement plans of the Europeana Foundation.

The involvement of the DARIAH network is of crucial importance. DARIAH, which is currently going through the processes of establishing itself as an official European Research Infrastructure Consortium, provides a sustainable network to humanities researchers throughout Austria, Croatia, Denmark, France, Germany, Greece, Ireland, Italy, Lithuania, The Netherlands, Serbia, Slovenia and Switzerland. The DARIAH network will not only be able to provide ongoing expertise in the tools and services that researchers require to exploit the content aggregation by Europeana, but it will also channel news and information about the tools and services and strategy of the Europeana Research project, thus ensuring its wide dissemination throughout Europe (and indeed beyond). CESSDA will be able to perform a similar role for the social sciences. The development of this network will also be of crucial importance to Europeana's engagement with the scholarly community beyond the end of the project, informing a renewed Europeana Strategic Plan, due mid 2014, which will include a specific focus on researchers as users, and which content and partners are required to maintain this focus.

Other stakeholders in the project will also be of importance. The inclusion of the OAPEN will provide a valuable link to the publishing community, leveraging open the potential to include further publisher content in Europeana Cloud. At the same time, they will permit further innovation. The sharing that is made possible by Europeana Cloud will create stronger and deeper links between the content provided by cultural heritage organisations and that provided by publishers.

The project will also draw on the experience garnered by the Europeana Foundation in projects such as DM2E (Digital Manuscripts to Europeana), Europeana Connect and Europeana Awareness.

## Dissemination and Events

Exploiting the network capacity described above, a number of events and related dissemination activities are envisaged for the Europeana Cloud project.

Within WP1, a number of events (both physical and virtual) will be established to establish the project's deep and meaningful **engagement with the humanities and social science communities**. A Research Advisory Board will provide oversight of the direction of WP1, and offer guidance to the strategic relationship between the research community and Europeana.

WP4 will provide the link with the partners providing content to this project. A series of content ingestion workshops will not only **introduce new partners to the working processes of Europeana**, but also initiate dialogue on the rights issues in sharing content for research purposes and sharing content via the cloud.

As mentioned above, WP5 will have a crucial role in understanding the long-term **technical needs of the Europeana Network of aggregators** as well as demonstrating the benefits of working within the

Europeana Cloud infrastructure. As part of the Europeana Task Force for the cloud, a series of events, some of which will be funded by Europeana's day-to-day activities rather than through the funds for this project, will be organised to achieve this. Interested members of the Europeana Network will be invited to attend and contribute. A final conference will involve a wide range of stakeholders. Discussions will be embedded at other events, such as the annual gathering of the Europeana Network members. Related to content ingestion workshops in WP4, there will also be a specific event for content providers within the project to come and discuss the same issue within the context of offering content for this project.

WP6 will have a co-ordinating role in ensuring that communication with all the relevant stakeholders throughout the project is harmonised. But it will also take the outcome and messages from the other WPs and ensure they are promoted to the broadest possible group.

WP6.4 will see the Europeana Foundation pursue a range of dissemination channels to promote the benefits of a cloud-based infrastructure to an audience beyond the stakeholders of the project. This will include digital library and cultural heritage organisations worldwide, as well as the funders and government.

In WP6.5, LIBER will work with subject librarians and other channels to researchers to communicate the potential research capabilities of the Europeana Research proposal. LIBER's networking capacity will enable the widest possible reach within Europe

WP6 will also see the construction of project website and blog. Other forms of social media engagement will be explored.

## Section B3. Implementation

### B3.1. Consortium and key personnel

*Describe each consortium partner, highlight their specific expertise for and their role in the project and indicate the key personnel (brief CV) foreseen to work on the project. Clearly indicate the co-ordinator, all of the participants of the consortium and the role of each in the proposed project. Include all necessary stakeholders in the value-chain. The organisation proposed to coordinate the project should be able to demonstrate competence and experience of managing large-scale international cooperation projects.*

The Consortium, co-ordinated by the Europeana Foundation is extensive (35 partners) and brings together content providing partners with partners who have strong track records in the Europeana network in the areas of work to be undertaken, as well as some new players with specific expertise in areas such as technical infrastructure, digital research tools and the legal, strategic and economic issues associated with cloud based systems and full text content. In addition the consortium is considerably strengthened by the inclusion of eight university members of DARIAH (Digital Research Infrastructure for the Arts and Humanities) as well as CESSDA (Council of European Social Science Data Archives) via University of Gothenburg. Together they can coordinate and interact with researchers that Europeana has not previously been able to reach. Participants span the humanities and social sciences research domain and include partners from 16 Member State as well as universities, libraries, archives and museums which will provide valuable new types of researcher focussed content for Europeana. The consortium also includes two unfunded partners – DARIAH EU itself and Sibiu University. In addition, the inclusion of OAPEN provides a valuable link to the publishing community, offering the potential to include further publisher information in eCloud.

#### **P 1. Europeana Foundation (EF)**

Europeana is an online portal that contains over 18 million digitised objects from Europe's museums, libraries, archives and audiovisual sources. It connects to Europe's cultural heritage by providing access to items from over 1,000 heritage collections. Europeana is supported by funding from the European Commission and member states. Originally known as the European digital library network – EDLnet – it is a partnership of 100 representatives of heritage and knowledge organisations and IT experts from throughout Europe. They contribute to the work packages that are solving the technical and usability issues. The project is run by a core team based in the National Library of the Netherlands, the Koninklijke Bibliotheek. Overseeing the project is the Europeana Foundation, which includes key European cultural heritage associations.

Jill Cousins is Programme Director for the European Digital Library and The European Library. As Executive Director of the EDL Foundation, she has many years' experience in web publishing, which are now being applied to the libraries and the cultural heritage arena. Her past experience includes the commercial publishing world as European Business Development Director of VNU New Media and scholarly publishing with Blackwell Publishing running their online journals service. Prior to publishing she had a variety of marketing and research careers in the information field. These ranged from being the Marketing and Event Director for Learned Information to managing her own research company, First Contact. All of which is very deviant from her first career as a Middle Eastern Map Researcher for the Ministry of Defence. Jill holds a PhD in Geography on Sixteenth Century Arabic and Turkish Sea-charts.

Alastair Dunning is Programme Manager at the European Library. Alastair has extensive experience in developing and disseminating digitised resources in the humanities and social sciences. Working as part of the Arts and Humanities Data Service, he was in charge of advice and guidance to scholars developing digital resources, and therefore addressing issues such as metadata, interface development and user engagement. More recently, he has worked at the UK funding agency JISC, overseeing its GBP25m digitisation programme, and acted on the Advisory Board of many large-scale projects such as the British Library's 19th-Century Newspaper Digitisation Project.

## **P 2. Ariadne Foundation (ARIADNE)**

ARIADNE Foundation (<http://www.ariadne-eu.org/>) is an international not-for-profit foundation that has been working towards empowering share and reuse of learning resources since 1995. Facilitating the sharing and reuse of digital resources that can be used to support learning (i.e. educational content or learning objects) has been its goal for several decades. To support this goal, ARIADNE has created a standards-based technology infrastructure that allows the publication and management of digital learning resources in an open and scalable way. The vision that drives the continuous development of this infrastructure is to provide flexible, effective and efficient access to large-scale educational collections in a way that goes beyond what typical search engines provide. ARIADNE was initially set up by a network of European stakeholders, expanding now into a global network of member institutions sharing the same vision. ARIADNE is a member of the Global Learning Objects Brokering Exchange (GLOBE) Alliance and contributing towards the development of a global learning infrastructure that can be accessible from all.

Dr. Nikos Manouselis is the R&D Director of Agro-Know Technologies, a research-oriented SME focusing on knowledge-intensive technology innovation for agriculture and rural development. He is also giving lectures on topics related to Web Science and Web Technology at the University of Alcalá, Spain. Nikos is serving as the President of the ARIADNE Foundation. He has extensive experience in the implementation of large scale initiatives and project coordination in the context of EU Programmes. He is the Co-Chair of the Recommender Systems Challenge of the ACM RecSys Conference 2012, that includes an Exploratory Track on scientific paper recommendation.

Dr. Jad Najjar holds a PhD in Computer Engineering from the Katholieke Universiteit Leuven (Belgium) on learning technologies, standards, applications and user experience. He is a senior expert in EU projects and standards bodies in learning technologies, metadata, attention/usage metadata, learning management systems, competences based educational systems, repositories and specifications. Dr. Najjar research interests includes competency metadata models, eportfolios, attention metadata, metadata of learning objects, empirical analysis on actual use of metadata and learning objects.

Dr. Xavier Ochoa is a Principal Professor at the Faculty of Electrical and Computer Engineering at Escuela Superior Politécnica del Litoral (ESPOL), Guayaquil Ecuador. He coordinates the research group on Teaching and Learning Technologies at the Information Technology Center (CTI) at ESPOL. He is also involved in the coordination of the Latin American Community on Learning Objects (LACLO), the ARIADNE Foundation, and the Ibero-American Society for the Advancement of Learning Technologies (SIATE). His main research interests revolve around Informetrics, specially related to the field of Learning (Learnometrics) and Science (Scientometrics).

## **P 3. Athena Research Centre (ATHENA RC)**

The Digital Curation Unit (Athena RC/IMIS) adopts an interdisciplinary approach, taking into account the full lifecycle of digital assets, such as records, digital surrogates and scholarly/scientific datasets. The research areas of the DCU include: domain knowledge representation; use of natural language processing techniques in digital curation; new approaches to database preservation; ensuring metadata interoperability; user models and communities; and work flow models for the ingestion and preservation of data. Within *Preparing DARIAH*, the DCU developed a research activity process model, so as to embed future DARIAH assets and services in the researcher's scientific discourse. In addition, the DCU is involved in EHRI, a project aimed at supporting the European Holocaust research community by establishing unified online access to dispersed sources relating to the Holocaust all over Europe and Israel. In EHRI, the work of DCU addresses the identification and analysis of scholarly research practices and use of archival materials in the area of Holocaust studies and how these might support and enhance research in the field, as well as the creation of a set of data and functional requirements based upon the analysis of scholarly research practices.

Panos Constantopoulos is the Director of DCU (Athena RC/IMIS) and Professor and Director of the Information Systems and Databases Laboratory at the Department of Informatics, Athens University of Economics and Business. He was previously Professor at the Department of Computer Science, University of Crete, where he founded and led the Information Systems Laboratory and the Centre for Cultural Informatics at ICS-FORTH.

Costis Dallas is a Research Fellow of DCU and an Assistant Professor of Cultural Heritage Management and Advanced Technologies at Panteion University, Athens, and Associate Professor of Cultural Heritage Informatics at the University of Toronto. His current research interests lie in the field of digital curation, in particular as it concerns cultural heritage knowledge and public communication practices in museums.

Christos Papatheodorou is a Research Fellow of DCU and an Assistant Professor in the Department of Archive and Library Science, at the Ionian University. His research interests include Metadata interoperability; Evaluation of Digital Libraries and Information Services; User Modeling,; and Web 2.0 technologies.

Agiatis Benardou is a Researcher at DCU. She has been involved in the DARIAH, CARARE and EHRI FP7 projects and she has also worked for the Directorate of Prehistoric and Classical Antiquities, Hellenic Ministry of Culture.

Dimitris Gavrilis is a Researcher at DCU. His research interests include digital library architectures, interoperability between digital library systems and he has been involved in the design and development of MOPSEUS and the CARARE repository and in the DARIAH, CARARE and EHRI.

#### **P 4. Bavarian Library Consortium (BSB)**

The Bayerische Staatsbibliothek (BSB) -Bavarian State Library- is a member of Germany's federal library system together with Deutsche Nationalbibliothek and Staatsbibliothek zu Berlin, and part of the "Virtual National Library". Keeping nearly 12 million volumes with an ancient stock of about 1.5 million volumes, it is after Berlin's the second largest universal research library in the German speaking countries. The library's collection focuses on the subject areas of Central European History, Regional History, Eastern Europe, Music and Far East. The Munich Digitisation Centre (MDZ) of BSB, since 1997 has built up significant expertise and capacity in the digitisation of different library materials from the 8th to the 21st centuries. So far, more than 380 million files have been produced as outcome of



more than 60 individual or cooperative projects including a public-private partnership with Google. The content of more than 500.000 digitized books to be delivered through the eCloud project originates from the Bavarian State Library, the University Libraries of Augsburg, Eichstaett, Regensburg, Wuerzburg, the University Library of the Technical University of Munich and the University Library of the Bundeswehr.

Dr. Klaus Ceynowa is the Deputy Director General of the Bayerische Staatsbibliothek in Munich. He is responsible for the development and co-ordination of the digitization strategy of the Bayerische Staatsbibliothek and has negotiated the Library's contract with Google.

Gabriele Meßmer is head of the Digitisation Division of the Munich Digitization Centre / Digital Library of the Bayerische Staatsbibliothek in Munich. She is a metadata specialist and coordinator of the digitization projects of the Bayerische Staatsbibliothek. Based on her experiences in a great variety of projects, she is responsible for the further development of digital library services and especially metadata management

#### **P 5. The Central and Eastern European Online Library (CEEOL)**

Central and Eastern European Online Library CEEOL is an online archive which provides access to full text indexed articles from 770 humanities and social science journals and re-digitized documents pertaining to Central, Eastern and South-Eastern European topics, at [www.ceeol.com](http://www.ceeol.com). It was set up in 2000 with the aim of making Central and Eastern European humanities and social studies publications available to a broader public. Over the last 10 years, the CEEOL team has built up a network of publishing houses, editorial boards, research institutes and higher education organizations from Central, Eastern and South-Eastern Europe, or focusing on this area. Our experience in content acquisition, content management, digitalization processes and digital libraries has enabled us to build up a comprehensive pool of metadata and a solid user base, proving that CEEOL has become an indispensable information source for students and scholars.

Wolfgang Klotz: Bachelor of Theology and Philosophy. 1990-1998 years director of the Centre for East/West European Studies and Cultural Exchange "Palais Jalta" in Frankfurt/Main. Since 1998 co-founder and managing director of Questa.Soft GmbH and the CEEOL project. 2009-August 2012 director of the Heinrich Böll Foundation South East Europe Operation. Sept 2012 - managing director of Questa.Soft GmbH and the CEEOL project.

Bea Klotz: Bachelor of economics. 1990-1999 marketing and key account manager of a leading international ERP vendor. 2000-2001 business development director direct and indirect channel Central- and Eastern- Europe of a leading CRM solution provider. 2001-present: Area manager for South Eastern Europe, Hungary and Poland at Questa. Soft – CEEOL.

Aurelian Urzica: 1998-present: Co-founder and co-managing director of Questa.Soft GmbH

Cosmina Berta: Bachelor of economics, MBA at the Open University Business School, London. Founding member and member of the Board (1992-1994) of the International House Foundation Timisoara (a Soros Foundation for an Open Society Romania program) and Office Manager at International House Timisoara (1993-1999). 2001-present: Area manager for Romania, Czech Republic, Slovak Republic, the Baltic states, at Questa.Soft – CEEOL.

#### **P 6. Consortium of European Research Libraries (CERL)**

The Consortium of European Research Libraries (CERL) is an active community of more than 190 libraries with notable holdings of early printed material. In close relationship with the community of scholars and researchers in the field of the European printed and written heritage, CERL has since its foundation in 1994 provided services for both its member libraries and the scholarly community. Its primary concern is to improve access to the scattered written and printed heritage of Europe for a growing interdisciplinary community – among them scholars studying book history, political and social history, art history, ecclesiastical history, philosophy, etc. CERL has the ambition to build onto existing resources to create a comprehensive suite of tools and services for every researcher interested in the study of the European book heritage.

Marian Lefferts has been the Executive Manager of the Consortium of European Research Libraries (CERL) since 1998. Before taking up her position at CERL, she worked on the Illustrated Incunabula Short-Title Catalogue (published by Primary Source Media) at the British Library and the International Medieval Bibliographical on CD-ROM (published by Brepols) at the International Medieval Institute in Leeds. Since 2009, she has been Secretary of the LIBER Steering Committee for Heritage Collections and Preservation, and she actively participated in several WPs in the Europeana Libraries project (2011-2012).

Thomas Baldwin completed an MA in Library and Information Studies at University College London in 2010. Since qualifying Thomas has worked as an intern for The European Library, first as a Collections Assistant with responsibility for a subject-based audit of TEL's 450+ collections, and a formulation of recommendations for adopting a collection development strategy. Subsequently he worked as a Projects Assistant, assisting with administration and co-ordination of the Europeana Libraries project. In 2011, Thomas Baldwin joined CERL to work on the Europeana Libraries project, specifically on the business and sustainability planning for the international library-domain aggregator that was developed in the project.

Stefanie Rühle studied East European History and Slavic Studies in Kiel and librarianship in Hamburg. From 2001 to 2007 Stefanie worked in Kiel at the German National Library of Economics (ZBW), on the development and maintenance of application profiles, data conversion and cataloguing of economic literature from Eastern Europe. Since 2007 she has worked for the Göttingen State and University Library where she is engaged in different metadata projects such as the "Competence Center for Interoperable Metadata" (KIM), the "Zentrales Verzeichnis Digitalisierter Drucke" (zvdd) and the "German Digital Library" (DDB). Since 2008 Stefanie has been a member of the DCMI Usage Board. She is also co-chair of the DCMI Libraries Community and DCMI Libraries Application Profile Task Group. In 2011, she joined CERL part-time to work on the Europeana Libraries project, specifically on the functional requirements for the international library-domain aggregator that was developed in the project, on the development of the Europeana Semantic Elements, the Europeana Data Model, a review of data aggregation workflow, and, finally, data enhancement.

Alexander Jahnke is the head of the department for metadata and data conversion at Niedersächsische Staats- und Universitätsbibliothek Göttingen and has been with the Data Conversion Group since 2003, where he supervises the HPB file preparations, develops and maintains the CERL Thesaurus and its Assisted Searching facility, the Material Evidence in Incunabula database, development and maintenance of the CERL website, as well as other CERL Services. The Data Conversion Group has been employed by CERL under the terms of a framework contract since 1998.

## **P 7. Institute of Information Science and Technologies CNR-ISTI (CNR)**

The Institute of Information Science and Technologies (CNR-ISTI, <http://www.isti.cnr.it>) is an institute of the Italian National Research Council (Consiglio Nazionale delle Ricerche - CNR). The Institute is located in the CNR Research Area of Pisa. CNR-ISTI is the largest Italian research institute working in the area of information science and technologies. The Project will be carried out by the Networked Multimedia Information Systems Lab (NeMIS) (<http://www.isti.cnr.it/ResearchUnits/Labs/nmis-lab/>) and the High Performance Computing Lab (<http://www.isti.cnr.it/ResearchUnits/Labs/hpc-lab/>). The NeMIS Laboratory has played a significant role in the development of Europeana, being involved in EDLNet, Europeana version 1.0, Europeana version 2.0 and ASSETS. The HPC Lab has experience in the development of Cloud infrastructures, gained through the participation at the projects Contrail, MIDAS, InGeoClouds.

Carlo Meghini is a prime researcher at the NeMIS Lab of ISTI, working in the area of digital libraries and digital preservation. He is involved in the making of Europeana since 2007, through the EDLnet, Europeana version 1.0, Europeana version 2.0 and ASSETS Best Practice Networks. For more information: <http://nmis.isti.cnr.it/~meghini/>

Raffaele Perego is a prime researcher at the HPC lab of ISTI, leading the High Performance Computing Lab. His main research interests include efficiency issues in data mining and Web information retrieval, distributed information retrieval, high performance and cloud computing. For more information: <http://hpc.isti.cnr.it/~raffaele/>.

## **P 8. The University and National Library of Debrecen (DE)**

The University and National Library of Debrecen is a public library incorporating seven scientific libraries governed by a single administrative unit since 2001. Its predecessor was opened to the public in 1918 with a collection of 10 000 documents. Presently it is the second largest library of Hungary with its holdings of 6 million items. The Library has been a deposit library since 1952. The Library started its digitisation projects in the second half of the 1990s focusing on old books, periodicals, printed music and unique collections such as bookplates or playbills. The projects have always put a special emphasis on creating standard metadata either in MARC 21 or in Dublin Core format. The majority of our materials is stored in a D-SPACE archive. The 18th and 19th century Hungarian and Debrecen periodicals and 19th century Debrecen playbills that are planned to be contributed to Europeana Research are valuable resource material to literary, historical and civilization studies focusing on the Central European region.

Dr. Márta Virágos had been the director of the library of the Medical University, Debrecen, Hungary, for almost two decades when in 2000 she was appointed director of the National and University Library of the newly established University of Debrecen. In 1995 she obtained a university doctorate with a qualification of *summa cum laude*, in 1996 she received a PhD in informatics, and in 1998 she successfully completed an MBA program. She has served on the board of several national and international library associations and she has been involved in organizing a number of national and international conferences. She has delivered over twenty professional lectures at domestic conferences, and she has given eleven lectures abroad. She regularly publishes in professional periodicals.

Dr. Klára Koltay has been an assistant director of University and National Library since 1997 with responsibilities in the area of collection development, the integrated library system and the National Document Delivery System which is co-ordinated by the Library. She has been involved in the

Library's effort to translate the Library of Congress Subject Heading System, digitisation and bibliography conversion projects.

Zsuzsanna Köpösdi is a subject specialist of sociology, psychology and English and American studies and has been a coordinator of digitisation projects in these subject areas since 2005. Both responsibilities made her experienced in using MARC 21 and Dublin Core metadata, and subject heading systems. She has been involved in creating training courses for librarians in the best practices of creating digital collections.

Gabriella Harangi is an IT specialist, responsible for the development and maintenance of the Library's institutional repository. She has been responsible for the technical coordination of several projects on digitisation and electronic archiving.

### **P 9. Fundacio DIALNET**

Fundacion Dialnet (<http://www.fundaciondialnet.es>) is a Spanish university foundation in charge of Dialnet (<http://dialnet.unirioja.es>), one of the main bibliographic database worldwide. Dialnet is a platform of resources and documental services with the main purpose of increase the visibility and access to Hispanic scientific production over the Internet. The platform has more than 900.000 registered users from 90 counties and contains 3.5 million documents references including journal articles, theses, books and collective books.

Eduardo Bergasa Balda, Technology Manager at Fundacion Dialnet. He holds a degree in Computer Science from Deusto University. Prior to joining Dialnet he developed his work in the IT department of the University of La Rioja as IT Security Manager.

Laura López Martínez, Contents Manager at Fundación Dialnet. She has a degree in Documentation from Alcalá de Henares University and in Humanities from La Rioja University. Since 2003 she worked in different national entities such as the Geographic Institute and the National Library of Spain

### **P 10. The Croatian Academy of Sciences and Arts (HAZU)**

The Croatian Academy of Sciences and Arts promotes and organises scientific research; encourages the application of the findings of this research; develops artistic and cultural activities; and is concerned with the Croatian cultural heritage and its affirmation throughout the world. It publishes the results of scientific research and artistic creation. It makes proposals and gives its opinion on the promotion of sciences and arts. The Digital Collection of the Croatian Academy includes digitised materials from the Academy's research units and the Academy Library, primarily assigned to research in the humanities and social sciences. This is a unique digital repository, representing the Croatian Academy's scientific and artistic collection on one web site, offering free web access to the content representing the European heritage and science.

Vedrana Juričić, M.A., has been the head of the Library of the Croatian Academy of Sciences and Arts since 2006. She graduated and received her master's degree in information science, librarianship (1986). She collaborated in Croatian and international research projects on cataloguing music manuscripts. In 2008, she founded the Digital Collection of the Croatian Academy Library i.e. The Digital Collection of the Academy (since 2009).

Prof. Dr. Vjera Katalinić, musicologist, senior researcher and director at the Academy's Division of the History of the Croatian Music and associate professor at the Music Academy, University of Zagreb.

Her principal research areas are musical collections and archives, instrumental music and opera. She published 3 books and approximately 150 articles, and participated in around 80 conferences and 4 national and international projects.

Branko Hećimović, Ph.D., is associate member of the Croatian Academy of Sciences and Arts and the head of the Division of the History of the Croatian Theatre. He received his doctoral degree in 1965 for the dissertation to the topic The Croatian Dramatic Literature between the Two World Wars. He initiated issuing The Repertoire of the Croatian Theatres, and is the leader of a project bearing the same title. He further leads the digitisation project of theatrical cast sheets.

Jasenska Ferber Bogdan is art historian. She has worked as senior associate at the Fine Arts Archives of the Croatian Academy of Sciences and Arts since 1997. She has been project coordinator for the digitisation process at the Fine Arts Archives from its beginnings in 2008. As of 2009, when the Fine Arts Archives joined the new digital collection, she has continued working as project coordinator at this Academy unit.

Magdalena Mihalinec graduated in 2009 from the Faculty of Humanities and Social Studies (history of art; history); she will soon have completed her two-year studies in museology at the same Faculty. She works at the Glyptothèque of the Croatian Academy of Sciences and Arts as museum documentarist (arranging museum documentation and organising exhibitions). She engages in the digital collection project and coordinates the digitisation-related tasks within the museum.

Kristina Polak Bobić graduated Philosophy and Croatian culture (2000) and Information sciences – librarianship (2001). She has worked as a bibliographer of Croatian Academy publications (monographs, journals and series, printed music) at the Library of The Academy since 2002. She is editing metadata for Academy publications for the Digital Collection.

### **P11. The Royal Library (KB DK)**

The Royal Library is Denmark's national library and university library for the University of Copenhagen. KB is main library for the University of Copenhagen and delivers professional and scholarly library service at the very highest level in support of education and research. The institution has just initiated a "digitalization on Demand" project aiming at digitalizing material of special interest for the research community. Furthermore, the library has recently started to provide research data services based on the open source programme DataVerse. The library is also involved in providing and resolving unique identifiers for digital content in Denmark. The institution administers the national cultural heritage of both Danish and foreign origin in terms of published works (books, periodicals, newspapers, leaflets), manuscripts, documents, maps, pictures, photographs and music in conventional or digital form. The institution provides optimal access to the collections on present-day conditions for the purpose of research and has over the years digitalized journals, literature and sheet music, which is considered of special interest for researchers in general. The Royal Library serves as a national aggregator for Europeana.. As such we have negotiated with a number of content providers, especially around photo collections.

Birte Christensen-Dalsgaard holds a Ph.D. in Physics. She is Deputy Director General at the Library and is responsible for the general development of digital services there. She is responsible for activities around digitization and dissemination of cultural heritage objects and is very much into user driven innovation and development. She has experience in designing IT architecture for digital libraries and preservation issues. She is a member of the national committee

working on recommendations to the parliament on relevant measures to secure the electronic cultural heritage. Recent activities include field studies to get information on user behavior.

Anne Ørbæk Jensen holds a MA in musicology and theatre studies from the University of Copenhagen (1986), later MA in Computermediated Communication (2004) and diploma in Management (2010). She started her career as Research librarian at the Music History Museum in Copenhagen after which she became a Research librarian at The Royal Library, Copenhagen, Music and Theatre Department. Today she is the Head of the Music and Theatre Department.

### **P 12. Kennisland (KL)**

Kennisland is an independent think-tank based in the Netherlands. Its mission is to make society smarter. The challenges of today's society demand new ways of innovation. KL develops solutions for the issues that crop up during the transformation to a knowledge society, and it plays a pioneering role in this process. Two key fields of work for KL are copyright and digital heritage. KL has been the public project lead of Creative Commons in the Netherlands since 2005 and one of the founders of the COMMUNIA Thematic Network (eContentplus). Within the EuropeanaConnect project (ICT PSP), KL was co-author of the Europeana Public Domain Charter, co-developed Public Domain Calculators for 30 European countries and co-developed the Europeana License framework which revolves around the Europeana Data Exchange Agreement. As partner in Europeana Awareness (ICT PSP), KL works on increasing compliance with the Europeana Licensing Framework and increasing the amount of content available via Europeana that can be freely re-used. KL is partner in Europe's largest digitisation effort, Images for the Future, focusing on knowledge sharing, copyright and business model innovation, is partner in the BMICE consortium, fostering business model innovation in cultural heritage, and co-designed business models for software tools giving access to digital heritage in CATCH Plus.

Paul Keller, is vice chair of KL. As senior copyright policy advisor Paul initiates new projects, advises governments, cultural heritage institutions and other organizations on open approaches to copyright policy, new media and innovation strategies. He is public project lead for Creative Commons Netherlands, Collecting Societies liason for Creative Commons international and a board member of iCommons. He is project lead for KL's activities in Images for the Future, COMMUNIA, EuropeanaConnect and Europeana Awareness.

Nikki Timmermans, is an advisor on digital heritage. Her work focuses on creating social change, providing support to citizens, small organisations and professionals who aim to achieve innovative ideas in the cultural heritage domain. She is founder of the Innovators Network Heritage sector and Open Culture Data network. She acts as project manager for Images for the Future and Creative Commons Netherlands and has managed KL's activities in European projects Bridge-IT and P2P Fusion.

### **P 13. KNAW DANS and KNAW NIOD (KNAW)**

Two institutes of the Royal Netherlands Academy of Arts of Sciences will participate in the project: DANS and NIOD.

**DANS**, Data Archiving and Networked Services, is an institute under the auspices of the Royal Netherlands Academy of Arts and Sciences (KNAW), which is also supported by the Netherlands Organisation for Scientific Research (NWO). DANS promotes sustained access to digital research data. For this purpose, DANS encourages scientific researchers to archive and reuse data in a sustained

manner, by storing them in a trustworthy repository such as our online archiving system EASY. DANS also provides access, through Narcis.nl, to thousands of scientific datasets, e-publications and other research information in the Netherlands. Moreover, the institute provides training and advice and performs research into sustained access to digital information. DANS took the initiative to establish the “Data seal of approval”, consisting of guidelines relevant for the assessment of Trusted Digital Repositories (see: <http://www.datasealofapproval.org>) An international board now manages the guidelines. The DSA ensures that in the future, research data can still be processed in a high-quality and reliable manner, without entailing new thresholds, regulations or high costs. DANS is closely involved in the DARIAH initiative (see <http://www.dariah.org>), the European research infrastructure for the arts and humanities and partner in the CESSDA project (research infrastructure for language resources). DANS is contributing to a number of European projects such as APARSEN (Networks of Excellence on digital preservation) and EHRI (European Holocaust Research Infrastructure).

Dr. René van Horik works as program manager and researcher at DANS. He holds a Phd in Information Science from Delft Technical University and an MA in Economic and Social History from Nijmegen University. He is involved in a number of initiatives to enhance the durability of research data. He is involved in the European project APARSEN aimed at realising a network of excellence on digital preservation. He is member of the steering committee of the NeDiMAH network (Network for Digital Methods in the Arts and Humanities).

Dr. Andrea Scharnhorst is Head of Research at DANS and member of the e-humanities group at the Royal Netherlands Academy of Arts and Sciences in Amsterdam. Her work focuses on modeling and simulating the emergence of innovations (new modes of behavior and learning, forms of communication, technologies or scientific ideas) in social systems. She has worked on transfer of concepts and methods at an interface between physics and social sciences and humanities. Recently, she studied classification systems such as Wikipedia categories and the Universal Decimal Classification.

Paula Witkamp is head of the digital archive section of DANS. She is managing the curation activities related to the ingest, storage and dissemination of research data sets.

**NIOD** is the Institute for War, Holocaust and Genocide Studies, an institute of the Royal Netherlands Academy of Arts and Sciences (KNAW). The NIOD-KNAW is the leading centre for the documentation, study and dissemination of knowledge of the history of the Netherlands during the Second World War. In 2002 the NIOD extended its field of expertise with Holocaust and Genocide Studies. Characteristic for NIOD-KNAW is the synergy between research and archival expertise. The institute is very active in making its collection more accessible and expanding the dissemination of information, knowledge and insights. The NIOD archive collection measures almost three kilometres, the unique collection of photographs consists of more than 100,000 photographs and the library collection contains more than 65,000 titles.

Dr. Hinke Piersma studied history at the University of Amsterdam. Since 1998 she works in the research department of the *NIOD Institute for War, Holocaust and Genocide Studies*. At the moment Piersma is project leader of a digital history project. She is working in close collaboration with computer specialists on big datasets and is an expert in the application of e-humanities technologies.

#### **P 14. KU Leuven (KU Leuven)**



K.U.Leuven (<http://www.kuleuven.be/>) has been a centre of learning for almost six centuries and is a charter member of the League of European Research Universities. European surveys rank K.U.Leuven among the top ten European universities in terms of scholarly output. The Human Computer Interaction lab (HCI) is part of the Computer Science department of K.U.Leuven and focuses on the management of and access to data and content that is available in a more or less structured way. The overall goal of the group is to provide flexible, effective and efficient access to large-scale collections in a way that extends beyond that which typical search engines provide. The success of HCI research is reflected in a large number of conference and journal publications as well as a strong involvement in national and international research and development projects, including STELLAR, iTEC, ROLE, EMURGENCY, PARIS, and others.

Prof. Dr. ir. Erik Duval is a full professor (“hoogleraar”) at the computer science department of the Katholieke Universiteit Leuven. Erik's research focuses on management of, and access to, structured and unstructured data. In practical terms, his research efforts mainly relate to end user oriented aspects like information visualization, mobile information devices, multi-touch displays and mash-ups. His group typically applies research results to technology enhanced learning, access to music and 'research2.0'.

Dr. Frans Van Assche holds a degree in Business Administration, Engineering and Management Informatics from the University of Leuven where he is currently employed with the responsibility of Secretary General for GLOBE, which is a worldwide network of repositories of learning resources. He is also in-house consultant at the European Schoolnet (EUN), a network of 31 European ministries of education. Frans Van Assche has been active in the field of ICT in education as a project manager, evaluator for and rapporteur to the European Commission and Strategy manager of the European Schoolnet.

Dr. Joris Klerkx is a post-doctoral research expert at the Computer Science department of the Katholieke Universiteit Leuven. His research interests include user experience design (i.e. information-visualisation, faceted search, multi-touch, mobile devices), metadata, and flexible access to a global learning infrastructure based on open standards in general. Joris has coordinated the research on educational content discovery in the ASPECT and ICOPER eContentplus projects, is involved in the EU FP7 projects STELLAR and ROLE, and in GLOBE (an international consortium that provides a distributed network of learning objects). He is currently serving as technical manager of the ARIADNE foundation.

#### **P 15 The Stichting LIBER Foundation (LIBER)**

The Stichting LIBER Foundation (Stichting LIBER) is the principal association of the major research libraries of Europe (<http://www.libereurope.eu>). Its current membership includes 425 national and research libraries of more than forty countries, mainly but not only, in Europe. Its overall aim is to support a functional network across national boundaries in order to ensure the preservation of European cultural heritage, to improve access to collections in European research libraries, and to provide more efficient information services in Europe. LIBER has forged strong relationships with library organisations, international research infrastructures and networks. It has been involved in several EU projects.

Scholarly Communication and Open Access are priorities for the LIBER Strategy. LIBER is also concerned with the implications of the growth of e-Science. It seeks to actively engage with the research community on this issue. It is a member of the Alliance for Permanent Access and, through the [ODE](#) project, it is working on defining the role of libraries in supporting scientific data exchange.



LIBER is also currently engaged in a study([AAA](#)) which will provide recommendations for the development and deployment of a Scientific Data e-Infrastructure (SDI) that would enable access to heterogenous data for researchers and citizens alike.

Susan Reilly coordinates LIBER's participation in European projects, working across a range of projects relating to Open Access, e-science, and digital libraries. Susan has recently completed a report on the Library's roles in data exchange and is currently working on a study to identify recommendations for a single authorisation, authentication and accounting (AAA) infrastructure for research information. She holds an MSc in Information Management from the University of Sheffield.

Marieke Willems is Communications Officer for EU Projects. She currently works on Europeana Newspapers and on MEDOANET, an open access project. Marieke holds a MSc in Communication science from the Radboud University in Nijmegen and a Master in Business Administration from the Escuela de Alta Dirección y Administración in Barcelona. Marieke has several years of experience in marketing and communication projects in an international context.

### **P 16 Cinecittà Luce**

Cinecittà Luce is a public company that works as an operative arm of the Ministry of Culture of Italy for the Italian film industry with its activities ranging from Italian film and documentary production, cultural and commercial promotion of Italian films in festivals and events around the world, and other film related activities. One of the most important pillars of Cinecittà Luce's heritage and activities is the Istituto Luce's Historical Film and Photo Archive made up of tens of collections of newsreels and documentaries in more than 150.000 titles from the beginnings of cinema to our days, and some three million photos. The archive is under constant work of cataloguing and digitization and hundreds of thousands of films and photos are available online for free at [www.archivioluce.com](http://www.archivioluce.com). Istituto Luce's Historical Archive has been nominated by the the Italian UNESCO Committee as the only 2011 Italian candidate to the prestigious "UNESCO Memory of the World Register". Istituto Luce's Historical Archive has since long been involved in important EU-funded projects on film heritage like Euscreen and EFG- The European Film Gateway, and is one the most important Italian content providers of Europeana.

Edoardo Ceccuti has been Director of Archivio Istituto Luce since 1991, after three years in the role of Production Manager and Executive Producer of films and documentaries. His experience in the audiovisual sector had started in 1973 with Warner Bros Italia; in 1980he left Warner Bros Italy to join Gaumont Italia where, in 1983 took charge of the administration management of the whole group. In 1985 he left Gaumont to embark on the activity of independent producer of films and documentaries for the Italian cinema and television market, activity carried on for Istituto Luce starting from 1988.

Roland Sejko, born in Albania, after a degree in language and literature he moved to Italy in 1991 to begin working as assistant of the Director of the Venice Film Festival. Soon after that he began his collaboration with Istituto Luce working on the film areas and following several film targeted projects. Since 2000 to the date he is in charge of the of the project of cataloguing, digitisation and release on-line of Istituto Luce Digitalised Film and Photographic Archives as well as project manager for the EC projects of the Luce Historical Archives.

### **P 17. MDR Partners (Consulting) Ltd**

MDR is an SME which since its formation in 2000 been centrally involved in developments to establish a strong presence for Europe's local cultural institutions and their content and new services in the

digital environment. It is the project manager for Europeana Libraries and has been the scientific coordinator/project manager of a number of important networking and best practice promotion activities under IST including CALIMERA under FP6, PULMAN and PULMAN-XT (FP5). MDR was co-ordinator of the EuropeanaLocal Best Practice Network project under eContentplus and is co-ordinator of the CARARE Best Practice network funded under the CIP ICT PSP programme, both of which are designed to help local and regional institutions make their content available through Europeana and deliver new services. Also under the eContentplus programme MDR co-ordinated both the ePSIplus Thematic Network and its successor the ePSIplatform contract, which supported development of the European Agenda on the re-use of Public Sector Information.

Robert Davies, CEO of MDR Partners, is an experienced leader and manager of European IST projects and networks in the CH sector since 1994 and spanning IST FP3 to FP7. He initiated and led European projects and actions such as DECIDE (FP3), PubLiCA-CEE (FP4) PULMAN (FP5) and CALIMERA (FP6), and is/was the co-ordinator of ePSIplus (eContentplus) and EuropeanaLocal (eContentplus) as well as participating in a number of other projects and BPN under ICT-PSP and FP7, including, CARARE and Europeana Libraries as well as a track record in Education projects under FP7 and the Lifelong Learning Programme in areas such as Games Based Learning and digital storytelling. He has a first degree in European literature and history and a Master's degree in library and information science. He is an experienced international consultant who has worked on education and culture sector assignments all over the world. He is currently seconded part-time to the World Bank as a contracted staff officer and leading WP3 on building new partnerships in Europeana Awareness

Mary Rowlatt is a qualified information professional with extensive experience of instigating and managing successful information development projects, with strategic impact and often in a multi-partner environment. She has a strong track record in web, information and digital content management, having worked for many years as a senior manager at Essex County Council, first as Head of Information Services for Essex Libraries and more latterly as Strategic Information Manager and Customer Services Manager for the Council. Her responsibilities included leading teams responsible for information services, web services, knowledge management and customer relations. She has personal expertise and interest in usability and interoperability. She has co-ordinated or participated in a wide range of projects relating to information and libraries funded by the EC and others, including: Europeana Libraries, Europeana Awareness, Future Library, AccessITplus, EuropeanaLocal, the Namibian Library Strategy, Access-IT, EMPATIC, DIP, PSINet, ePSINet, CALIMERA, ENCORE, seamlessUK, Live Community Networks, PULMAN, ONE-2, ISTAR, PLDP and SEAMLESS. She has a first degree in librarianship and a Master's degree in analysis, design and management of information systems.

Geoff Butters has managed a number of European Commission-funded projects, including BIBDEL and COINE and worked on projects CALIMERA and eMapps as well as various JISC-funded studies. Geoff is currently working for the Europeana Libraries project, monitoring and managing the use and reporting of resources by the 25 partners to ensure adherence to requirements. JISC-funded research areas have included a hybrid library demonstrator system; a prototype broker service; electronic current awareness service; portal development; and usability studies. He has worked as a lecturer and researcher in Library and Information Studies at CERLIM and Manchester Polytechnic and prior to joining academia he was a manager for SMEs in the private sector.

Carol Usher has worked as a member of the projects administration team for MDR since the mid

nineties, including CALIMERA, ePSIplus, ePSIplatform, ENTITLE, IMAGINE, AccessIT, EMPATIC, PATHS, CARARE and DigCurV. She has been responsible for the design and technical aspects for a succession of MDR Partners' projects and has created visual designs for large EC Network projects including reporting templates, PowerPoint presentations, newsletters, surveys and other project communication templates. Carol has a background in the design, development and implementation of quality systems procedures, is a qualified systems auditor and has been responsible for planning, control and implementation of Internal Quality Audit Programs. She is also experienced in the development of data input systems, data input & analysis, website design, development and maintenance.

### **P 18 National Archives Finland (NAF)**

The task of National Archives Service of Finland is to ensure that documents belonging to the national cultural heritage are preserved. It is a government body under the Ministry of Education and Culture and comprises [the National Archives](#) and the seven [Provincial Archives](#) operating under it. The National Archives guides the records management and ordines which public documents should be permanently preserved. It receives records of state authorities with permanent preservation value, as well as obtains and preserves private archives of importance for the society and makes them available in reading rooms and online. The National Archives is the national heraldic authority of Finland. It provides electronic records to Europeana through Archives Portal of Europe network. It enhances use of digital records for research and develops tools to improve access to electronic materials.

[Päivi Happonen](#), PhD, Research Director is the principal investigator responsible for the project and the work packages. She is Director of the National Archives of Finland division of research and innovation. She has a long time experience on electronic records management and is also Adjunct Professor of the University of Eastern Finland.

[Yrjö Kotivuori](#), Researcher at the National Archives of Finland is MSc in theoretical physics and mathematics. He is responsible for development of the Europeana Heraldica database. He has long time experience in developing research databases for humanities. He has been masterminding the student matricle 1640–1852 of the University of Helsinki (<http://www.helsinki.fi/ylioppilasmatrikkeli/>).

[John Strömberg](#), Senior Researcher at the National Archives of Finland is PhD in History and Adjunct Professor of the University of Helsinki. He is Secretary of the National Committee of Heraldry and will be an expert adviser in the project.

### **P 19. National Library of Wales (NLW)**

The National Library of Wales (Llyfrgell Genedlaethol Cymru; <http://llgc.org.uk/>) was established by Royal Charter in 1907 and aims 'to collect, preserve and give access to all kinds and forms of recorded knowledge, especially relating to Wales and the Welsh and other Celtic peoples, for the benefit of the public, including those engaged in research and learning'. NLW is a Welsh Government Sponsored Body and is one of the six UK legal deposit libraries and holds the national collection of books, newspapers, periodicals, manuscripts, archives, maps, image materials and is also the home of the National Screen and Sound Archive of Wales. NLW has over 10 years' experience of digitising cultural and intellectual heritage and is the foremost centre of digital excellence in Wales. NLW will contribute to Europeana Research its complete critical mass of holdings of public domain full-text journals. This content has already been digitised and represents a comprehensive record of the golden age of publishing in Wales and the most productive period in the history of Welsh literature.

Lyn Lewis Dafis, Head of Digital Developments, is a librarian who has worked at NLW for over 20 years. Lyn has worked at NLW for over 20 years and is responsible for managing the strategic and operational aspects of NLW's digitisation programme. He has extensive experience of collaborative digitisation initiatives, including Europeana Travel and Europeana Libraries. He has also been responsible for developing and implementing policies and practice relating to the metadata aspects of the digitisation programme.

Alan Vaughan Hughes, Digitisation Project Manager, is a senior member of the Digitisation Developments Section at NLW, managing successful mass digitisation projects, including Welsh Newspapers Online and Welsh Journals Online. Alan has over 10 years' experience of working on NLW's digitisation programme and has contributed significantly to the design and implementation of NLW's digitisation workflows and aligned metadata strategy.

Glen Robson, Senior DAMS Manager, started working in the library in 2005 focusing on ingesting digitised content into NLW's Fedora repository. Over the last 7 years he has worked on numerous digitisation projects to make items available online including a large collection of Probate records, collections of Welsh Photographs, Ballads, Journals and Newspapers. He has also worked in a number of collaborative projects as a technical representative including the JISC funded SWORD deposit tool, Europeana Travel and Europeana Libraries. His current role is managing the Fedora repository at NLW.

Vicky Phillips, Digital Standards Manager, has worked in numerous roles in the library including cataloguing and as a web editor. She now works as the Digital Standards Manager for the library and is responsible for ensuring NLW keeps up to date and consistent with metadata standards such as METS, MODS, DC, MIX, PREMIS and others. She has been heavily involved in defining metadata specifications for numerous NLW digitisation projects including Welsh Journals Online and Welsh Newspapers Online and is also responsible for mapping NLW metadata to ESE and EDM as part of Europeana Libraries.

## **P 20. National Technical Library, (NTK)**

National Technical Library (NTK) is a central professional library open to the public with a total of 1,2 Mil. volumes of books, journals and newspapers, theses, reports, standards, and trade literature in both printed and electronic forms. Its holdings form the largest collection of Czech and foreign documents from technology and applied natural sciences as well as associated social sciences. NTK systematically digitize its historical library fund which access to public by digital library Kramerius. Kramerius contains books and journals up to publication year 1911, namely 9 journals approx. 50 000 pages and 150 monographs approx. 25 000 pages.

Milan Janíček – IT specialist. Studied Informatics (Masaryk University, Brno, Cze) and Applied Informatics (University of Economics, Prague, Cze). Works in NTK since 2007 in Development of Electronic services department. Relevant experience - creating metadata tools and administration of Kramerius digital preservation system, OAI-PMH harvesting. Skills - XML, scripting languages, JAVA, UNIX systems administration.

Petra Pejšová – project administrator. Petra Pejsova graduated in Information science and librarianship at the Charles University in Prague. She works in the National Technical Library a head of the Digital National Technical Library where she leads a digitalization's projects. Currently she is

also a manager of the National repository of Grey Literature in the Czech Republic. She is a member of the working group for digital object long term preservation conception in Czech libraries.

### **P 21. The OAPEN Foundation (OAPEN)**

The OAPEN Foundation was founded in 2011 following the finalization of the OAPEN project co-funded by the EU in its eContentplus programme. OAPEN (Open Access Publishing in European Networks) is based in the National Library in The Hague and dedicated to Open Access book publishing in Humanities and Social Sciences. OAPEN develops Open Access models for books and works with academic publishers and research institutes to build a collection of Open Access books through the OAPEN Library ([www.oapen.org](http://www.oapen.org)). The OAPEN Library currently contains approximately 1000 peer reviewed freely accessible monographs in the Humanities and Social Sciences, from over 30 academic publishers in Europe. In addition, OAPEN manages and participates in OA book projects, such as the two pilot projects OAPEN-NL and OAPEN-UK, designed to gain experience with OA book publishing and measure the effect of Open Access on usage and sales. Recently OAPEN launched a new service, the Directory of Open Access Books (DOAB – [www.doabooks.org](http://www.doabooks.org)), to improve the discoverability of OA monographs.

Elco Ferwerda is director of the OAPEN Foundation. Before that he managed OAPEN as EU co-funded project at Amsterdam University Press. He joined Amsterdam University Press in 2002 as Publisher of Digital Products. Before joining AUP, he worked in various new media subsidiaries at the former Dutch newspaper publisher PCM, lastly as Manager Business Development for PCM Interactive Media.

Ronald Snijder is ICT manager for OAPEN and for Amsterdam University Press. He joined AUP in 2007 as Project Supervisor Digital Publications. He is responsible for all technical aspects concerning the digital products and the IT infrastructure. Before that he has worked as an IT- and information professional in several profit and not-for-profit organizations.

### **P 22. Open Knowledge Foundation Deutschland (OKF DE)**

The Open Knowledge Foundation Deutschland (OKF DE) is the German Chapter of the international Open Knowledge Foundation Network. It is an independent non-for profit organisation with a signed memorandum of understanding. OKF DE is a Do-and-Think Tank that combines legal expertise, best practice experience and technical know-how to advise government authorities and other institutions on open government and open data policies and implementations. OKF DE acts as a local facilitator in the Digital Manuscripts to Europeana (DM2E) project and has organised workshops on the legal aspects of opening up cultural heritage information. OKFN DE has extensive experience in organising community driven events, workshops and hackdays in the areas of open government data, open culture data and open science.

Daniel Dietrich is working part-time for the Open Knowledge Foundation since 2009. He is the Chairman of OKF DE, the German Chapter of the Open Knowledge Foundation. He is the Coordinator of the Working Group on Open Government Data and on Open Data in the EU and co-organises and runs events across the open data spectrum including OKCon, Open Government Data Camp and OKFestival. He is author of several studies and topic reports on Open Government, Open Data, Transparency and participatory Democracy.

Joris Pekel is the Community Coordinator for OpenGLAM. Joris lives in Berlin and works specifically with digital heritage related projects like Open GLAM. He graduated from the University of Amsterdam

in 2011 with a degree in New Media with a special focus in digital heritage and identity building. He is interested in opening up collections belonging to different cultural institutions and linking them together in order to create new ways of looking at history.

### **P 23. The Open University (OU)**

The Open University's Knowledge Media Institute was set up in 1995 in recognition of the need for the university to be at the forefront of research and development in the converging areas of Multimedia & Information Systems, Knowledge Management, later extended to Future Internet, Digital Libraries, Narrative Hypermedia, Semantic Web and Knowledge Services. Research is externally supported by the European Commission Framework Programmes, UK EPSRC and JISC. KMI has extensive experience in creating, managing and participating in national and European research projects related to cultural heritage, digital libraries, semantic web and technology enhanced learning. The JISC supported Connecting Repositories (CORE) project is directly related to the Europeana Research objectives. CORE harvests the content of all UK Open Access Repositories, analyses full text using natural language processing and discovers various types of relations between content. Users can access CORE services using the web portal, mobile devices and API. CORE aims to become a British Aggregator of Open Access repositories.

Dr Zdenek Zdrahal (Principal Investigator) is a Senior Research Fellow at the Knowledge Media Institute. His research interests include knowledge modelling and management, reasoning, knowledge based systems in learning, engineering design and Web technology. He has been PI on a number of national and European projects, including TINY-IN, SILVER (EPSRC), Clockwork, Cipher, Eurogene, Tech-IT-Easy (EU funded), CORE, ServiceCORE, DiggiCORE, RETAIN (JISC funded).

Petr Knoth (Lead Technical Developer) is a researcher in KMi focusing on various topics in natural language processing and information retrieval. He has been involved in four European Commission funded projects (KiWi, Eurogene, Tech-IT-EASY and DECIPHER) and four JISC funded projects (CORE, ServiceCORE, DiggiCORE and RETAIN) and has a number of publications at international conferences based on this work. Petr has been the main designer and developer of the CORE, ServiceCORE and DiggiCORE systems.

### **P 24. Poznań Supercomputing and Networking Center (PSNC)**

Poznań Supercomputing and Networking Center (PSNC), affiliated to the Institute of Bioorganic Chemistry of the Polish Academy of Sciences, was founded in 1993 to build and develop computer infrastructure for science and education in Poznań and in Poland. This infrastructure includes metropolitan network POZMAN, High Performance Computing (HPC) Center, as well as the national broadband network PIONIER. PSNC has been managing research and development within the field of new generation computer networks, high performance - parallel and distributed - computations and archive systems, cloud computing, grid technologies, in particular, projects, products & tools for grid resource's management. In the field of digital libraries PSNC is focused on building national digital libraries infrastructure by the development of digital libraries software, data sharing and aggregation services, e-learning resources, knowledge management systems and also digitisation process management and long term preservation services. These R&D activities are complemented by extensive practical experience with deployments of the tools supporting many elements of digitisation workflow. URL: <http://www.psnc.pl/>

Cezary Mazurek, Ph.D., is the Head of the Network Services Department at PSNC. His research expertise and experience include a wide variety of advanced network services including digital

libraries, interactive television, videoconferencing, telemedicine, data and information management and access to grid services. He has been the manager of numerous projects in those fields coordinated by PSNC, including the Wielkopolska Center for Telemedicine, Digital Library Framework: dLibra and interactive TV platform. He participated in FP6 projects: GridLab, Géant2 and Qualipso and also coordinated PSNC's participation in projects IMPACT, Europeana Local, HIPERMED. Currently he is a leader of activity SA4: Software Governance and project management team member in FP7 Geant3 project as well as Quality Coordinator in Wf4Ever project.

Marcin Werla, since 2002 has been working in PSNC as a computer systems analyst, since 2004 he leads the PSNC Digital Libraries Team. His professional interests include architecture of digital libraries, the integration of resources of distributed digital libraries and software engineering, especially software products management. He is strongly involved in many Europeana activities related to Polish cultural and scientific institutions, including projects like EuropeanaLocal and EuropeanaAwareness.

Marcin Mielnicki, M.Sc. Eng. in computing science, started working at PSNC in March 2007 as a member of Digital Libraries Team. Currently he is the lead person responsible for the development and maintenance of the PIONIER Network Digital Library Federation. He is an expert in operational activities in large scale metadata aggregation processes.

Adam Dudczak, M.Sc. Eng. in computing science, member of PSNC's Digital Libraries Team. Adam is responsible for development of Virtual Transcription Laboratory, an online collaborative research environment which integrates creation of transcription based on resources of digital libraries with customizable Optical Character Recognition services.

### **P 25. Trinity College Dublin (TCD)**

Trinity brings a number of strengths to this project, including expertise in digital humanities, user studies, and digital object preservation and delivery. Digital Humanities has been identified as a research area of strategic importance: it is one of 18 so named areas across the university. The Arts and Humanities at Trinity are particularly strong, as is the Trinity Long Room Hub, Trinity's Research Institute for the Arts and Humanities, founded and sustained through the collaborative effort of 7 academic Schools and the Trinity Library. It hosts a wide range of programmes, and supports the strategic development of interdisciplinary research programmes of scale, including Digital Humanities. Trinity has proven itself to be a growing force in this area. In the 2011-12 academic year Trinity had its first intake of students for a masters degree in Digital Humanities and Culture, in 2010 it launched the high profile 1641 Depositions Project (a collaboration with IBM), and in 2010 was awarded 6.8M by the Irish government to coordinate a national structured PhD in Digital Arts and Humanities.

Susan Schreibman is the Long Room Hub Assistant Professor in Digital Humanities at Trinity College Dublin. She is on the faculty of the School of English. Previously she was the founding Director of the Digital Humanities Observatory, a national digital humanities centre developed under the auspices of the Royal Irish Academy, Assistant Dean for Digital Collections and Research, University of Maryland Libraries (2005-2008), and Assistant Director of the Maryland Institute for Technology in the Humanities (2001-2004).

### **P 26. University of Tilburg (TILBURA)**

Tilburg University is a medium sized higher education institution in the Netherlands with about nine thousand students and thousand faculty. There are five departments: economics, law, social sciences, linguistics and philosophy. The University Library houses seven different collections under one roof.



The books and journals collections are on open, freely accessible shelves distributed over the three floors. The library collection consists of 800,000 printed works, including books, current subscriptions on journals, loose-leaf series, illustrations, old works and manuscripts and reports. The library also provides access to 11,000 electronic journals and to 130 databases. A new style of collection development - Tilburg University Library participates in an Elsevier trial for Patron Driven Acquisition (PDA), which is a new way of building a library e-books collection in close cooperation with end users. Tilburg University was the first university in Europe to develop a strategic vision of the digital library. This strategy focussed on electronic access to information from the users' desktops. In 1992, the library managed to initially implement these ideas with a new library building, 450 computer workstations for students in the library, and integrated access to various electronic information sources for all university staff and students.

Rob Grim is Head of Research Support/Research Data Specialist at Library and IT Services at Tilburg University. Rob has been involved in several national and international projects for innovative data services. Rob is a member of the management team of the Open Data Foundation (ODaF), a member of the Knowledge Exchange working group on research data and the LIBER e-Science working group. Rob is a specialist in research data and metadata management and standards.

### **P 27. University College London (UCL)**

UCL is London's Global University and powerhouse for research outputs across all major areas of academic study. UCL is consistently ranked in the top 10 universities in the world. The content which UCL Library Services is providing to Europeana Research stems from this powerful research activity and reputation. The CAVA repository content stems from the work of Language Sciences in the study of young children with possible speech impediments. The BSLCP repository likewise stems from Languages Sciences and concerns the use of Sign Language. UCL is also providing digitised copies of the philosopher Jeremy Bentham's manuscripts, a growing proportion of which with transcripts. This collection is being created as part of the high profile 'Transcribe Bentham' crowdsourcing project. Finally, there is digitised archival material from UCL's holdings of material from the author George Orwell : letters, diaries, literary notebooks, and photographs.

Paul Ayris is Director of UCL Library Services and UCL Copyright Officer. He is also President of LIBER (Association of European Research Libraries). Paul has extensive experience of working in European projects. He has participated in Europeana Travel and is Scientific Manager of Europeana Libraries. He also has extensive experience in advocating for library and information developments in Europe to the EU Commission as part of the European Research Area (ERA).

Martin Moyle is Acting Group Manager (IT Services) in UCL Library Services. Martin has very extensive experience of working on Europeana projects. He runs the DART-Europe E-Theses portal, an Open Access portal for European Research theses, which aggregates metadata for nearly 300,000 theses from 408 European Universities in 20 countries.

June Hedges is Acting Group Manager (Arts, Humanities and Social Sciences) in UCL Library Services. June has considerable experience in innovating service delivery, particularly for students in the Arts, Humanities and Social Sciences. She is leading the introduction of ReadingLists@UCL, a pan-university service to deliver digital readings for taught-course students via the institutional VLE.

### **P 28. University of Edinburgh, (UEDIN)**



Edinburgh University Library and Collections consists of a group of related collections, services and systems – physical and digital - distributed around the University and covering libraries, archives, museums and galleries. Other collections managed within the Colleges and Schools have a close relationship for policy guidance, collections support, project development and compliance with external standards. The principal collections are: Special Collections in the University Library, Main Library general collections management, Archives, Edinburgh University Collection of Historic Musical Instruments (EUCHMI), and the Talbot Rice Gallery, the University's art gallery. In addition, Library and Collections leads and participates in a range of research and development projects in partnership with colleagues around the University and beyond. Through its lead role in the recently completed MIMO project, Library and Collections have close links with Europeana and are actively involved with the Europeana Network. Library and Collections also has a strong Digital Library component with expertise in Open Scholarship, content repositories, systems integration and research, having been involved with many local, national, and internationally funded projects.

John Scally, Director of University Collections. His Directorship involves the strategic management of the University's museums and galleries, all printed and manuscript special collections and archives, collections management, digital imaging and conservation. His primary remit is to lead and direct projects and other activities that maximise the impact of the collections for teaching, research and cultural engagement.

Stuart Lewis, Head of Digital Library. His role covers a broad service portfolio including acquisitions, metadata, e-resources, digital library development, information systems, repositories, research publications and research data. Specialising in Digital Repositories, he has led numerous projects in the UK and New Zealand, with an emphasis on applying digital content technologies within higher education research.

Arnott Wilson, Head of Special Collections and University Archivist, works closely with the Director of University Collections at the University of Edinburgh to shape the strategic development of the Special Collections and Archives department, plan accordingly and manage its functions, services, budgets and staff. His main activities centre on planning and monitoring the annual work programme, managing team leaders and resources, forging partnerships with academic and other information professionals to develop new projects and initiatives, developing policy and procedures in line with professional and legal standards / compliance, and promoting collection development in terms of new acquisitions, purchasing and international exhibition loans.

Norman Rodger, Projects and Innovations Manager, is responsible for the development and coordination of projects – principally digital – within the Centre for Research Collections. His most recent role was to develop and manage the eContent*Plus* funded MIMO Project (Musical Instruments Museums Online), which ran from September 2009 until the end of August 2011. He has around 20 years' experience of working with European projects.

Scott Renton, Digital Library Officer (Digital Objects and Metadata Management), has led the technical and metadata developments of many of the digitised collections at the University of Edinburgh. Scott specialises in the management and description of digital images, their workflows through the digitisation process and out into publicly available web sites. Scott was a content specialist in the European funded MIMO project.

Morag Watson, Digital Library Development Manager, is responsible for the design and development of the digital infrastructure for Libraries, Museums and Galleries. This currently involves projects to improve resource discovery and delivery of licensed and locally created materials, and the development of repositories for scholarly communication, research data and cultural heritage materials. Morag has been involved with a range of national and Jisc funded projects.

James Toon, Research Repository Service Manager, leads the team responsible for the research repository at the University of Edinburgh. He is responsible for the delivery of the research repository service to the researchers at the university, and for the active promotion and development of that service. He has worked on local and national projects in his posts at both the University of Edinburgh and the National Library of Scotland.

### **P 29 University of Gothenburg (UGOT)**

The University of Gothenburg is represented in Europeana Research by the Swedish National Data Service (SND). SND is a national data infrastructure in Sweden and provides services for Health Science, the Humanities and Social Sciences. Among the services offered by SND is the identification, collection, documentation, preservation and dissemination of digital research material from the sciences covered. SND also engages in providing advice and support for researchers. SND is an active partner in CESSDA, IFDO, DDI Alliance and other relevant international organisations. Staff members from SND participated in among others the EU projects NESSTAR, FASTER, MADIERA, METADATER. SND is the coordinator for DASISH and WP leader in Data without Boundaries and SERSCIDA.

Hans Jørgen Marker is Director of the Swedish National Data Service, SND, since 2009. Before that he worked at the Danish Data Archive, DDA, for 25 years, and was director from 1997 to 2003. He is president of CESSDA since 2010, member of the IFDO board since 2009 and member of the DDI Alliance steering committee since 2004. From 2006 until 2009 he was chairman of the DDI Alliance expert committee, and he was Secretary of CESSDA from 1998 to 2010. He was President of the Association for History and Computing from 2001 to 2004. Hans Jørgen Marker has played a responsible role in connection with the EU projects NESSTAR, FASTER, MADIERA, METADATER and CESSDA PPP. He is coordinator for DASISH, connected to Data without Boundaries as member of its standing committee and participates in SERSCIDA.

Mattias Persson is Research Coordinator within Social Science at SND since 2011. He works with policy issues, legal matters, information management, guidelines and best practices, outreach activities and researchers support. Before SND he was a doctoral student in economics with a focus of applied micro economics, especially public economics and economics of education. Mattias has a Licentiate of Philosophy in Economics. Mattias participates in SERSCIDA.

### **P 30. University libre de Bruxelles (ULB)**

The Université libre de Bruxelles (ULB) has [13 faculties, schools and specialized institutes](#) that cover all the disciplines, closely combining academic input and research. The Université libre de Bruxelles is an active member of the [Research Area](#) and is involved in almost 80 projects financed by the 6th and 7th European Framework Programmes. Over the past few years, it has obtained 7 starting Grants from the [European Research Area](#) (ERC) to finance research in Medicine, Economics, Mathematics, sociology, or Political Science, as well as 2 Advanced Grant in Artificial Intelligence and Physics. In addition, the University's Institute for European Studies is recognized as a “Jean Monnet European research centre” for its work on European integration. The Archives & Libraries of ULB (A&B) has

invested equipment and human resources in the digitization of selective collections since 2005, resulting in what is called the “Digithèque”, available here: <http://digitheque.ulb.ac.be>. The focus is on collections with an interest for academic researchers in the humanities. The University runs an institutional repository since 9/9/2009. IT management and daily managerial operations of the IR is the responsibility of A&B. The IR is interoperable and indexed in most major European (and beyond) aggregators, such as Driver, BASE, Economists Online, Repec, etc. Recently, A&B has been leader of a work package in the “Network of European Economists Online” project (eContentplus), covering all aspects of interoperability, metadata standards, and technical infrastructure of the resulting subject repository portal, called Economists Online (<http://www.economistsonline.org>).

Benoit Pauwels is Head of Library Systems and Innovation for the Archives & Libraries of Université libre de Bruxelles since 1991. General and IT management of regional and national projects; participation in several European projects (LIRN, Decomate II, Elise II, NEEO). Participation as IT specialist (research, development, documentation) in projects on: institutional repositories, Belgian virtual union catalogue, portals, open linking systems, image databases, electronic PhD theses, electronic publishing, inter-library loan systems. Recently: contributor to the Driver 2 guidelines, leader of the EU-eContentplus NEEO workpackage covering metadata exchange and technical infrastructure of the subject repository portal. Knowledgeable in metadata schemes, fairly good knowledge of and some practical implementation of semantic web technologies (including Europeana Data Model).

### **P 31 University of Bielefeld - BASE (UNIBIE)**

Bielefeld University Library has contributed significantly to shape the German landscape of digital research libraries and electronic information and is heavily involved in national and european initiatives (e.g. DRIVER, OpenAire, OpenAIREplus) for research infrastructures for processing digital information. The search engine BASE (Bielefeld Academic Search Engine), which is now regarded as one of the top search engines for academic open access content worldwide (e.g. indicated by a high number of searches), provides access to about 35,000,000 publications from about 2,200 international repositories (May 2012). After a decade of experience in harvesting OAI metadata and operating a specialized search engine, BASE now shows an advanced quality in data aggregation and improved technical performance as compared to similar service providers. From the beginning in 2004 and in contrast to other search engines, BASE focused on European repositories in particular, so that almost every repository in Europe with in OAI interface is now indexed in BASE. The efforts to constantly improve the quality of OAI metadata are documented by the project "Automatic enrichment of OAI metadata by means of computational linguistics methodology and development of services for content-based integration of repositories", which was funded by the German Research Foundation (Deutsche Forschungsgemeinschaft, DFG). The automatic enrichment is now part of the regular processing steps within BASE and has led to a significant increase of DDC classified documents within the index, which is a groundwork to work with special subject parts of OAI metadata.

BASE provides a search API to allow digital libraries to search within BASE and integrate the results in their own settings. In addition, there is also the so called BASE metadata store, from which third parties can draw the aggregated and normalized OAI metadata. The search API is used by several digital libraries and search engines in Germany, the metadata store is for example used by the project "AuthorClaim" and by "High North Research Documents". Further projects of Bielefeld University Library include the support of subject-specific developments. In the field of Social Sciences, Bielefeld University Library participates as technical partner in the Collaborative Research Center 882 "From Heterogeneities to Inequalities" (CRC 882) for compiling and servicing the information and data infrastructure at the CRC. Bielefeld University Library contributes to dedicated initiatives such as

German Initiative for Network Information (DINI), Knowledge Exchange and Data Documentation Initiative (DDI).

Friedrich Summann is head of the IT Department of Bielefeld University Library and has been responsible for many digital library projects in the past. Currently amongst other projects he is working as a technical director for BASE (Bielefeld Academic Search Engine) and in this context dealing with search engine driven portals and the practical usage of the OAI-PMH protocol regarding harvesting, aggregating and enhancing metadata (for BASE, DRIVER, OpenAire). He co-authored the DRIVER and COAR Guidelines and the DINI Certificate 2010. Based on his expertise in this field he has conducted an OAI-PMH workshop at the CERN OAI7 conference in Geneva 2011.

### **P 32. University of Patras (UPAT)**

The University of Patras is the 4th in size higher education institute in Greece with 22 academic departments and more than 16.000 students. It was founded back in 1964 and up to now it has become the second institution in the country regarding research projects and funding. It consists of the Schools of Natural Sciences, Engineering, Health Sciences, Humanities & Social Sciences and Economics & Administration. The Department of Computer Engineering and Informatics founded in 1980 was the first computer science academic school in Greece and even now it is considered the leading school in the area.

Library & Information Center (LIC) was founded in 1965 and it is the major scientific library in the regions of Western Greece. Research and development within LIC focus on information and digital libraries technologies and related user oriented services. Currently participates as a partner in Europeana v1.0 Thematic Network and APARSEN project. More particular LIC's long experience and expertise could be summarized in the following areas:

- automated library services, including information management & integration applications (ERMs), information systems, etc.
- digital libraries applications and projects, e.g. digital collection suite: Kosmopolis (<http://xantho.lis.upatras.gr/kosmopolis/>), Pleias (<http://xantho.lis.upatras.gr/pleias>), Daniilida (<http://xantho.lis.upatras.gr/daniilida/>), etc
- open access e-publishing projects & initiatives, platforms Pasithee (<http://xantho.lis.upatras.gr/pasithee/>), Dexameni (<http://xantho.lis.upatras.gr/dexameni/>), Directory of Greek Digital Resources ([http://www.lis.upatras.gr/Libworld/gr\\_resources\\_EL.php](http://www.lis.upatras.gr/Libworld/gr_resources_EL.php))
- performance evaluation of library services and user surveys · user instruction and support

Panagiotis (Panos) Georgiou has a Diploma of Mining and Metallurgy Engineering from the National Technical University of Athens and an MSc in Environmental Geotechnology from the University of Newcastle upon Tyne (UK). He is working in the Library & Information Service of the University of Patras since 1996 and his responsibilities include research project management, supervision of LIS' quality assurance system, web services & e-resources management, digital collections development, OA e-publishing initiatives and user support. His research interests deal mainly with OA digital libraries and e-publishing issues in Greece and quality assurance in libraries. Currently he is active in promoting and monitoring the OA issue and e-publishing in Greece, by operating the Directory of Greek Digital Resources

([http://www.lis.upatras.gr/Libworld/gr\\_resources\\_EL.php](http://www.lis.upatras.gr/Libworld/gr_resources_EL.php)) and publishing related reports e.g.

Scholarly Publishing & Open Access in Greece: 2009 Report

(<http://nemertes.lis.upatras.gr/dspace/handle/123456789/2637>)

Despoina Gkogkou has a Diploma of Archive and Library Science from the Ionian University (Corfu, Greece) and is now doing her master thesis on a Greek literary journal of early 20th century at the Department of Philology of University of Patras. She has worked as a librarian for 5.5 years at the library of Academy of Athens' Research Centre for Modern Greek Dialects - I.L.N.E. and for 4 years at the Samos' Public Library, where she acted as a project manager of the "Educational Support via Mobile Libraries" program and also the Library's director. For the past 4 years she has been responsible for the function of the institutional repository of University of Patras amongst her other responsibilities at the institution's library.

Fieroula Papadatou has a Diploma of the Department of Educational Science and Early School Education from the University of Patras (Greece). She started working in the Library & Information Center of the University of Patras in 1999 with main responsibility the organization and the operation of 32 school libraries in the region of South-West Greece. Between 2002 and 2009 in the frame of the project TELEPHAESSA she has been the project manager of the working package that dealt with the development and the enrichment of the Library's subject repository. Moreover she was involved in various digital collection projects and now she contributes to the operation of the Directory of Greek Digital Resources ([http://www.lis.upatras.gr/Libworld/gr\\_resources\\_EL.php](http://www.lis.upatras.gr/Libworld/gr_resources_EL.php)) and to the operation of the Library's Institutional Repository (NEMERTES, <http://nemertes.lis.upatras.gr>).

### **P 33. VU University Amsterdam (VUA)**

VU University Library is a relatively large scientific library. The Library contains collections both online and in print on all [academic disciplines](#) within the university as well as [special and historical collections](#). The Library's mission is to make content in any form digitally available. The Library already submits the content of the VU academic repository ([Dare](#)) to the [Driver](#) portal through [DAREnet](#). We possess a wide variety of content we would like to add to Europeana: digitized materials from our special collections, with a focus on Dutch protestant culture, digitized historical maps (17<sup>th</sup> – 20<sup>th</sup> century), digitized photographs and film material related to the history of the VU University, the content of the open access journals the library hosts and supports, a number of lectures and knowledge clips on video and a growing collection of digitized books and journals. All these collections are available in Open Access.

Peter Vos. ICT Developer, VU University Amsterdam library, specialized in library systems, web services and metadata.

Anneke Houtkamp. Metadata specialist, VU University Amsterdam library

Willemien van Dijk. Conservator, VU University Amsterdam Library Special Collections

Sandra de Maesschalk. Information Specialist, coordinator of the VU University Amsterdam Library's digitization projects

### **P 34. Els Jacobs Advies & Onderzoek (EJA)**

Els Jacobs Advies & Onderzoek (Els Jacobs Consulting) is a small consultancy company based in The Netherlands and operating in the national and international cultural heritage sector. The company has been involved in several Europeana projects since 2012, performing different roles and responsibilities relating programme management, policy development, strategy and advocacy. In the Europeana Cloud project Els Jacobs Advies & Onderzoek will contribute to developing the governance model (WP5) and managing the project (WP7).

Els Jacobs is Executive Director of Els Jacobs Advies & Onderzoek. She has a strong background in strategy and policy development, having worked for the United Nations Educational, Scientific and Cultural Organization (UNESCO) as the secretary-general of the Netherlands National Commission for UNESCO. Prior to an international consulting career, she worked in the cultural heritage and academic environment for many years, first as a researcher and lecturer in history at Leiden University and then as guest curator and programme manager at the National Library of the Netherlands and the maritime museums in Amsterdam and Rotterdam.

**P 35. Semantika (SEM)**

Semantika is a software development company based in Slovenia, Europe. It has over 10 years of experience in Software Development, Web Solutions, Mobile and Multi-touch Application. The company is specializing in natural user interfaces and human-computer interaction. Semantika also has extensive experience in the field of cultural heritage. One of their key products is Galis – a collection management system, used in the majority of Slovenian museums, including national, regional, municipal and private institutions. This standards compliant application covers all aspects of documentation in museums and galleries of different sizes. The system extends to the web and includes national (e.g. museums.si) and an international web portal (<http://museums>), collecting information about museums worldwide and presenting them to the public and to the museum community in a searchable format. The data is also presented in Museums mobile applications for various platforms, including iPad and iPhone. Some of the features of the system already make use of the Europeana API.

Expertise - Semantika has completed several projects involving Natural User Interfaces and has planned, designed and developed various intuitive applications for an extensive list of clients, which include Microsoft, Banka Koper, Gen Energija, Gorenje and IAEA (International Atomic Energy Agency). Semantika is currently involved in the EU funded project Europeana Inside. This includes a consortium of museums, libraries, archives, cultural heritage institutions and software providers who are working to develop scalable, large-scale infrastructure and tools to open up cultural heritage collections for aggregation and re-use.

Goals and role in the project - Given its vast experience with software development, museums, heritage and new technologies such as mobile, tablet and multi-touch tables, Semantika will mostly be contributing to the development of the Europeana Research Platform in WP3.

Sašo Zagoranski is R&D Lead of Semantika with extensive knowledge of collection management and museum documentation. He graduated in Computer Science and has 15 years of experience as a software developer, lecturer at IT conferences and consultant in the field of natural user interfaces, and e-learning solutions. He has been appointed to an expert group on digitalisation by the Slovenian Ministry of Culture, serves as consultant to the IAEA and works on the Europeana Inside project.

Nina Zagoranski is the CEO of Semantika and has a degree in Law. In Semantika she is focusing on product managing, web publishing and content aggregation. Over the past few years, mostly within Microsoft's worldwide initiative Partners in learning, she has managed several projects in the field of e-learning, including development of learning materials as well as organizing and executing training courses.



**Unfunded partners:****P 36. DARIAH**

DARIAH, the Digital Research Infrastructure for the Arts and Humanities aims to enhance and support digitally-enabled research across the humanities and arts. DARIAH-EU will develop, maintain and operate an infrastructure in support of ICT-based research practices and support researchers in using ICT-enabled methods to analyse and interpret digital source materials. DARIAH emerged in 2006 as part of the European Strategy Forum on Research Infrastructures (ESFRI) roadmap, and the successful completion between 2008-11 of a preparatory project, "Preparing DARIAH", intended to set up the physical, strategic and human elements of the research infrastructure, and to ensure it is on a firm legal and financial footing. DARIAH is now into the transition phase, and is currently being established as a European Research Infrastructure Consortium (ERIC). This legal framework will facilitate the long-term sustainability of DARIAH. To date, 10 countries (Austria, Croatia, Denmark, France, Germany, Greece, Ireland, The Netherlands, Slovenia and Serbia) have signed a Memorandum of Understanding (MoU) formally stating their willingness to support the establishment of the DARIAH-ERIC. In addition, Fondazione Rinascimento Digitale, Italy, Vilnius University, Lithuania and the Swiss Academy of Humanities and Social Sciences signed the Memorandum of Understanding wishing to become DARIAH-EU Cooperating Partner Institutions. France will be the host country of the DARIAH-ERIC.

The mission of DARIAH is to facilitate long-term access to, and use of, all European Arts and Humanities (A+H) digital research data. Its core strategy is to bring together national, regional, and local endeavours to form a cooperative infrastructure where complementarities and new challenges are clearly identified and acted upon. The DARIAH infrastructure will be a connected network of people, information, tools, and methodologies for investigating, exploring and supporting work across the broad spectrum of the digital humanities. Researchers will use DARIAH to:

- find and use a wide range of research data from across Europe
- exchange knowledge, expertise, methodologies, and practices across domains and disciplines
- ensure that they work to accepted standards and follow best practice
- experiment and innovate in collaboration with other scholars.

Activities during the transition phase of DARIAH are coordinated by the DARIAH-EU Coordination Office, hosted at the Göttingen Centre for the Digital Humanities (GCDH). DARIAH partners contribute to its objectives through their participation in one or more of the following Virtual Competency Centres, established in 2011: eInfrastructure (VCC1), Research and Education (VCC2), Scholarly Content Management (VCC3), and Advocacy, Impact and Outreach (VCC4).

Dr. Tobias Blanke, Director, DARIAH-EU, is a Senior Lecturer in the Centre for e-Research, Department of Digital Humanities at King's College London. He heads the Centre's teaching strategy. His main interests are in the development and research of digital libraries and infrastructures for research, particularly in the arts and humanities. Tobias works on several international projects and committees. Most notably, he is one of the directors of DARIAH, an infrastructure on the ESFRI Roadmap to create an integrated research infrastructure for arts, humanities and cultural heritage data. As Director of Science and Technology for DARIAH, Tobias takes a lead on publications, workshops and conference activities. Tobias also leads the joint research work for EHRI, a pan-European consortium to build a European Holocaust Research Infrastructure. His academic background is in philosophy and computer science.

Sally Chambers is the Secretary-General for DARIAH-EU, based in the Göttingen Centre for Digital Humanities, Germany. She is jointly responsible for the preparation of the submission of the DARIAH

European Research Infrastructure Consortium (ERIC) application, a legal framework that will facilitate the long-term sustainability of DARIAH. Before joining DARIAH, Sally worked for The European Library, focusing on interoperability, metadata and technical project coordination. Her recent projects included Europeana Libraries, a project to establish a sustainable library-domain aggregation service for Europe, and ARROW, a project to establish a rights information management infrastructure to facilitate digitisation in Europe. She is actively involved in the European Library Automation Group (ELAG) and the Dublin Core Metadata Initiative, and is currently editing a book on the future of the library catalogue to be published by Facet Publishing in 2012.

Gabriele Kraft, Communication Officer, DARIAH-EU. After studying Social Sciences at the University of Göttingen, Gabriele worked in the Centre for Retrospective Digitisation at the State and University Library in Göttingen (SUB). From 2008 to 2010 she headed the library of the Goethe Institute in Göttingen. From 2010 until April 2012 she worked as researcher in the department for Electronic Publishing in the DFG funded project “Information Platform Open Access” and was involved in project management activities in the Research and Development Department in the SUB. Since the establishment of the German part of the DARIAH-EU Coordination Office in March 2011, Gabriele has been working as the Communication Officer for DARIAH-EU, based at the Göttingen Centre for Digital Humanities, Germany.

### **P 37. University of Sibiu (SIBIU)**

The Lucian Blaga University of Sibiu (LBUS) and the Brukenthal Palace are in a strong and permanent cooperation, through the academic staff exchange. The Library of the Brukenthal National Museum, Sibiu - <http://www.brukenthalmuseum.ro/> - is an 18<sup>th</sup> century cultural institution, one of the most important libraries in Romania. Its founder was Baron Samuel von Brukenthal, Governor of Transylvania (1777-1787). The Brukenthal Library was always regarded as the main research centre of Southern Transylvania. The LBUS - <http://www.ulbsibiu.ro>, as a complete centre of academic excellence and social renewal, has 9 faculties. The Library activity is completely automated by using a modern informatic system, Softlink-Liberty 3, integrated with equipments based on the Rfid technology. Theological Library (Branch Library), was attested in documents for the first time in 1786

Volovici Maria Rodica, PhD, Engineer diploma - The Polytechnic Institute of Bucharest – Diploma in the field of bibliology and the information science, The University of Bucharest –A Postgraduate Academic Course; Doctor’s degree, PhD in engineering science “Lucian Blaga” University of Sibiu; Director of the Central Library; Associate teaching to the LBUS - “Information science” departement (1992-present); Mastered Foreign Languages: French; English; Experience gathered - 6 Programmes.

Ittu Constantin, PhD; Currently Head of the Brukenthal Library; researcher at the Brukenthal National Museum, Sibiu, Romania; Lecturer at the Lucian Blaga University, Faculty of Letters and Arts, teaching biblioteconomy/ librarianship; Director of the *Baron von Brukenthal – Homo Europaeus* project (for. „Sibiu, European Cultural Capital, 2007 ”); Grandholder: Vienna (1994), Heidelberg (1996), Oxford (1996 și 2003), Salzburg (2004), Montenegro (2008);

Vișa Ioan-Irinel, 1993-1997, “Lucian Blaga” University of Sibiu; 1998-2012, The Library of the LBUS, IT specialist ; Mastered Foreign Languages: French; English. Experience in projects: 2004-2007 - “SCRIBE” – Acquisition, procesing and vizualization informatic system, of the rare ancient books collection”; 2008-2011, project "TEMACOD - Techniques for the digital content management" ; project: SIPTEH - Integrated system for indexing and online sharing



Marginean Elena, Education: 1992-1997, “Lucian Blaga” University of Sibiu, Faculty of Economics; Mastered Foreign Languages: English. Professional Experience: 1998-2012, The Library of the LBUS, Collection Development Head. 2011-2012, Europeana Libraries- project, as Expert Documentarist

Govoreanu-Constantinescu Iuliana. Education: Lucian Blaga” University of Sibiu – Library of the Theological Faculty „St. Andrei Saguna”.Archives National de France – Paris: Bachelor of Theology. Mastered Foreign Languages: German – excellent; English – good; French. Professional Experience: Librarian, The Library of the Theology Faculty.

### B3.2a. Chosen approach

*Explain the structure and organisation of your work plan, its overall strategy, and the methodology used to achieve the objectives. Attention should be given to the description of the technical work to be performed.*

Europeana Research consists of six major Work Packages; a seventh Work Package ensures the project proceeds in line with the tasks and deliverables articulated in the plan.

These six work packages can be aligned with the overall objectives for Europeana Research.

1. To provide access, at Europeana, to **2.4m new metadata records and 5m research-focused digital items** from across European universities, libraries, data centres and publishers.

WP4, managed by CERL, will provide oversight of the metadata and content ingestion approach. The process of ingestion is not new to either CERL or of course the European Foundation, having successfully overseen the ingest of 5m digital records as part of the Europeana Libraries project. WP4 will also include tasks related to metadata – both aligning the metadata with the Europeana Data Model, but also enriching the metadata so that it caters more fully to end-user needs, particular the needs articulated by the researcher community in WP1.

The 2.4m metadata records will be drawn from new partners who are funded within this project and are listed in Table 0.a

The 5m digital items will be drawn from a selection of the existing partners listed in Table 0.b – and possibly others depending on the requirements of the Content Strategy in WP1.2. Items will refer to distinct digital objects stored within the Europeana Cloud (e.g. each separate digital image, text file, audio-visual file)

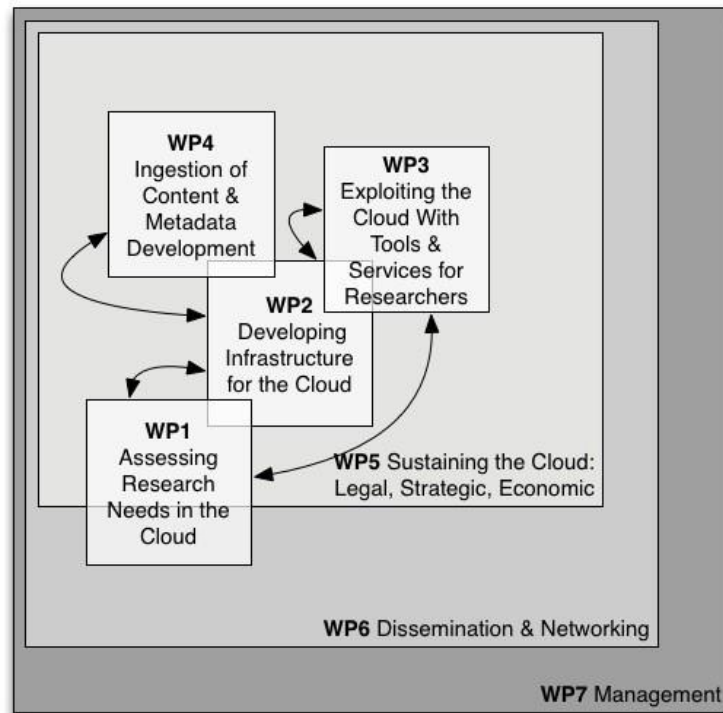
2. **To create a cloud-based infrastructure** capable of delivering cost-efficient content and metadata storage for stakeholders across Europe
3. **To understand and address the legal, strategic and economic issues** of a cloud-based system for content cultural institutions and domain aggregator
4. To achieve **broad consensus on the benefits of a cloud-based system**

WP2 is the core Work Package for these objectives, in that it will be the engine room that creates the cloud infrastructure for the project partners. However, WP5 and 6 have equally important roles. WP5 will explore the strategic, legal and economic issues related to the development of this structure, and WP6 will communicate with the broader Europeana Network and beyond, setting the platform for the long-term up-take of the Europeana Cloud infrastructure.

5. To develop a **digital platform, named Europeana Research**, to discover and use European research content
6. Via this cloud, **provide tools and services for researchers that permit innovative research** that exploits digitised content in Europeana

WP 1 will engage with the humanities and social science researchers over the lifetime of the project, identifying user needs and how they might be met within the Europeana Research platform. WP3 will

underpin the development of the Europeana Research platform. It will have responsibility for matching scholarly requirements to the new and existing content of Europeana, and for providing tools and services that assist scholarly information seeking and analysis in a web environment.



*(There are a number of interdependencies between Work Packages in this project. The diagram above illustrates them.)*

### **Work Package 1 - Assessing Researcher Needs in the Cloud and Ensuring Community Engagement**

Through a user-centric approach based on work already conducted within DARIAH and CESSDA, WP1 will focus on the identification and assessment of researcher needs in the humanities and the social sciences for Europeana Cloud, while ensuring the active engagement of the wider research community. It will feed into the technical architecture to be developed in WP2 and the tools development of WP3.

Task 1.1 will *establish a Humanities and Social Sciences Research Communities Advisory Board*, which will guide the activities of the work package and validate the key deliverables. The members of the Board will be selected using a range of criteria including stage of research career, coverage of humanities and social science disciplines and level of digital maturity.

Task 1.2 will produce a *Content Strategy for Europeana Research*, guiding Europeana's long-term strategy for aggregating research-focused content. The task will involve a state of the art report based on a literature review of scholarly use of content (data, primary sources and publications). It will investigate researchers' current use of Europeana and The European Library material. In tandem with Task 1.3, Task 1.2 will explore and analyse the usefulness and relevance of the existing content within Europeana, alongside the new content which will be ingested as part of this project. It will also offer

guidance to content that can be aggregated from existing providers to Europeana during the course of the project. This will allow Europeana to focus on attracting particular collections which will engage specific communities of researchers.

Task 1.3 (*Research user requirements for Europeana*) will run in parallel to Task 1.2. It will conduct desk research to analyse the current situation in digital research practices and tools for the humanities and social sciences research community, providing context for the web survey also undertaken within Task 1.3. It will create an evidence-based account of what actual researchers use/find of value among resources (from Europeana, The European Library etc.), how they access them (e.g. entry points, information seeking processes) and how they then use them (e.g. which elements/attributes need to be there, etc.); also, how digital tools and content become fit-for-purpose within innovative academic research. The web survey will incorporate and validate results of the desk research on content analysis, scholarly practices and existing tools and services. Further to this, the web survey will address questions arising from the assessment of the existing content available through Europeana.

In order to evaluate the findings of the aforementioned tasks, a series of four hands-on expert forums (Task 1.4, *Research Community Engagement: Expert Forums*) will be organised. The expert forums will engage wider communities, inviting experts to evaluate and confirm findings on tools (developed in WP3), content and scholarly practices to provide further depth to the evidence base. Results from the expert forums will be used in the final analysis and reporting on *Research Community User Evaluation* (Task 1.5). A related task in WP6 will disseminate these findings more broadly.

## **Work Package 2 - Developing the Infrastructure for Europeana Cloud**

This work package aims at the development of a sustainable, trusted cloud based storage for metadata and content within the cultural domain. Using metadata **and** content from Europeana, The Europeana Library and the Polish Digital Library Federation, and content aggregated during the project from new and existing providers, the WP will build Europeana Cloud.

After a phase of requirements specification and evaluation of existing systems (Task 2.1), this work package will follow the Agile / Scrum approach of development. As iterations progress, the design and approach can be adjusted to reflect the insights gained in testing and in the development of researcher-oriented services in the other work packages. (Tasks 2.2, 2.3, 2.4, 2.5)

Task 2.1 (*Requirements Gathering and Evaluation of Technologies*) incorporates the service requirements from WP1 and the legal and economic directions from WP5.

During the design phase WP2 will test the design and core services against the requirements from WP1/WP5 to ensure alignment. It is envisioned that the requirements will imply the development of at least three core services to support the cloud storage infrastructure:

- 1. An identifier look-up service** to support any external identification mechanism is supported and resolve identifiers to an internal digital object identifier. Any digital object can then be retrieved with its Europeana ID but also with its External ID.
- 2. An authentication and authorization service** will control and log the access and manipulation of any digital object in the cloud.

**3. A notification service** to monitor the status of documents together with provenance and administrative meta information. The notification service is a key element in the shift of the aggregation model from a pull to a push paradigm. Clearly not every aggregator is interested in all the data in the cloud, therefore this mechanism will notify about changes to digital objects for which the party has expressed interest. This will significantly reduce the amount of communication needed between aggregators and enables a higher degree of automation

This task will also evaluate the potential of different packages such as Redis, MongoDB, BerkeleyDB, Memcached, Hbase, Cassandra, Riak and CouchDB to provide the common software that underpins the Europeana Cloud, using a sample of actual content.

Task 2.2 will develop the *Europeana Cloud for Metadata*. It will use rapid prototyping - a well-established method to develop complex systems across different interest groups.

Once partners have made their server resources available for the development of the cloud the following actions will be executed: setting up a storage system; configuring a thin storage facade layer; establishing, together with the identifier service, a prototype running system. The performance and elasticity of this first prototype will be evaluated and documented, forming a baseline for further developments and evaluations.

Once the performance and elasticity of this first iteration is approved, the authentication and authorization service will be introduced and the impact on performance and resource costs will be analysed. Outcomes of this evaluation will then be fed back to WP5 to ensure that the value/cost ratio is acceptable to potential Europeana Cloud members. To finalise the core system a basic notification mechanism, based on an asynchronous messaging system, will be implemented. As with all parts of WP2, the design of this messaging system will be designed so allow for easy migration from existing systems at Europeana.

Alongside the development of Metadata cloud in task 2.2, Task 2.3 (*Prototype Development of the Content Cloud*) will integrate digitised content into the same Europeana Cloud.

The complexity of mixing content and metadata within one geographically distributed storage infrastructure (metadata in the range of KB per object and content in the range of up to half a GB per object) will require in depth analysis and performance tuning. Given that the cloud should provide immediate access to digital objects from multiple repositories, WP2 will evaluate the integration with open source repositories such as Fedora Commons. In addition some legal restrictions (e.g. specific digital content can not be shared/stored abroad) will trigger the investigation of specific set ups to manage the flow of content within the cloud.

In Task 2.4 (*Storage Service Feedback Loop*) each iteration of the Tasks 2.2 and 2.3 will be evaluated for functionality and performance, using industry-standard testing procedures. The results will be fed back into the iterative development work under Tasks 2.2 and 2.3. The API development in Task 2.5 (*Bidirectional Metadata and Content Access API*) will also evolve over time: based on an initial set of API definitions, API calls will be defined and implemented.

A cloud infrastructure opens the possibility to distribute some computational tasks related to the stored metadata and content. In many cases only some parts of the stored digital object are needed. Executing the program close to the original data and transferring the results reduces therefore

significantly the amount of exchanged content. To enable the cloud infrastructure to support such tasks we will develop or extend the available infrastructure in Task 2.6 (*Service Platform and Execution API*). This task will provide the necessary execution API and a service to store temporarily extracted information for retrieval via the standard cloud APIs. Tools in WP3 can make use of the APIs developed here.

### **Work Package 3 - Exploiting Europeana Cloud with services and tools for researchers**

In close alignment with the tasks of WP1 on user needs and existing tools, this work package will exploit both new and existing content in Europeana Cloud and develop tools for end users that can interface with the Europeana Research platform. An important goal for this project is to draw users towards the tools that can be used against many types of data, including cultural heritage content. Therefore WP3 will try to find appropriate ‘hooks’ into the researcher workflow, where Europeana content can be made best use of.

Task 3.1 of WP3 will develop *Scenarios, Use Cases and Personas* (descriptions of typical researchers addressed by this project) that describe in detail what kind of tool a researcher would typically use, and how that use would fit in his typical workflow. This will result in a number of requirements and ideas on the types of tools and services (existing or new ones) that typical researchers will expect from the Europeana Research platform. These personas will be developed in conjunction with WP1 and will serve to keep the tools and services developed within WP3 on track.

In task 3.2 (*Iterative design, development and evaluation of tools*) WP3 will make use of a small set of researchers and an exploratory research methodology, paired with an iterative design approach for the development and evaluation of user experiences for tools to be tested in realistic research environments.

Such a design research methodology uses rapid prototyping to evaluate ideas in frequent short iteration cycles. After initial brainstorming and scenario building, paper prototypes will be used to gather initial feedback on early ideas and then develop more functional digital prototypes in rapid iteration cycles.

This task will work in close concert with WP1. It will take inspiration from the existing tools already researched in Task 4 of WP1. User feedback from WP1 will then be used to make further iterations of these tools, or to provide guidance as mash-ups that combine different tools and new tools are developed in Task 3.2. The expert fora from task 1.4 will be used to evaluate the outcomes of Task 3.1 and Task 3.2, and the resultant tools will be disseminated to a wider circle of the researcher community.

The tools likely to be considered for integration in the Europeana Research platform in WP3 have the following focus:

- Discovery and Access: typical examples like PhilosMap and ResearchTable rely on the visualization of citation, authorship and other relations to enable novel discovery and access approaches;
- Accessing and Analysing Big Data: here again, information visualization techniques can support the analysis of large sets of research data;
- Annotation: *textus* is a typical example of such a tool, leveraging semantic web technologies to support annotation sharing by researchers;

- Transcription: in this context, scientific authoring tools that enable researchers to easily include existing Europeana material in new aggregates are one interesting approach.

Task 3.3 (*SPARQL end point development*) takes a slightly different tack. To create unified, semantically enabled, access to both the metadata and the content stores, it builds a RDF triplestore with both a backend aggregation element and a front end access to the enriched layer. This will make the metadata and the content work together and be more beneficial to researchers.

Task 3.4 (*Further development of the Europeana Research Portal*) takes care of integrating the tools developed in task 3.2 into the Europeana Research platform. It further develops the platform to work with the cloud infrastructure developed in WP2 and in accordance with the researcher requirements of WP1.

#### **Work Package 4 - Ingestion of Content and Metadata Development**

This work package has 3 major elements:

1. ingestion of metadata and content,
2. metadata enrichment
3. contributing to the ongoing assessment and development of the Europeana Data Model (EDM).

##### *Tasks 4.1 and 4.2 Ingestion of metadata and content*

Task 4.1 will create a plan and ingest 2.4 million additional metadata records into Europeana, making use of the established data ingestion tools available to the Europeana Foundation. These tools are capable of handling large amounts of data in a wide range of data formats in use by the various domains. The data will subsequently be made available in the Europeana Cloud.

Under Task 4.2, 5 million distinct digital objects will be added to the Europeana Cloud . To facilitate the development timing needs of WP2 task 4.2 begins with an initial ingest of sample content from existing stores at Europeana, The European Library, OU and Poznan. The second wave of ingestion comes from the content being submitted by the project partners and from Europeana's existing providers. One determining factor in sourcing content will be the outcomes of the researcher requirements in WP1. In fact Task 4.2 will continue on from WP1.2 ensuring that the specific content ingested will help create a corpus of aggregated materials that are useful for researchers. Task 4.2.2 will also feature the development of new tools to allow the Europeana team to ingest the content – existing tools will be developed where feasible.

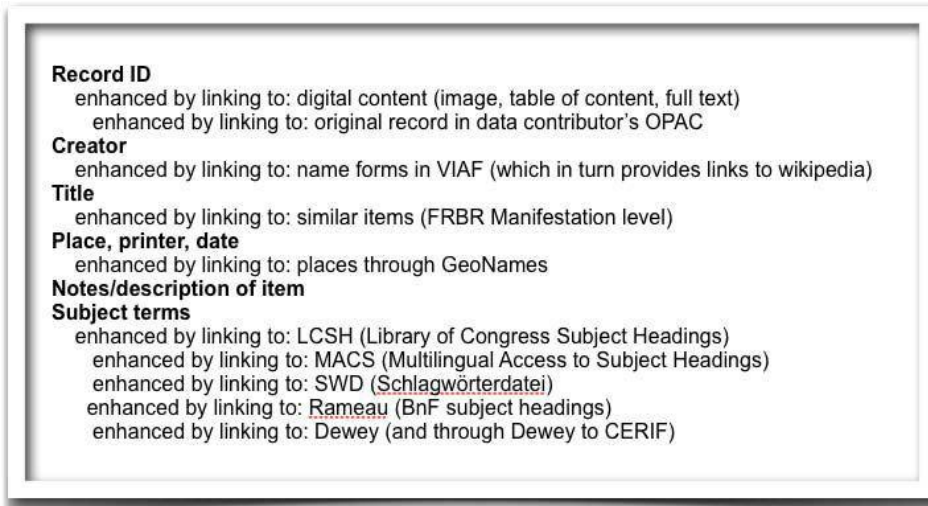
Together with Task 2.4., the project will evaluate the process of ingesting content directly into the Europeana Cloud. The evaluation will focus on the functionality required to establish quality assurance when aggregating data, and be used to enhance the ingestion process.

The ingestion process will be governed by a consolidated metadata and content ingestion plan, derived from deliverables 4.1. and 4.2 which will be reviewed and updated at regular intervals. In order to assist all project partners and new content providers to prepare their metadata and content for ingestion, CERL and EF will host four metadata and content ingestion clinics.

The aim of Task 4.3 (*Exploring Shared Metadata Enrichment*) is to connect research material in the Europeana Cloud and to improve metadata interoperability. Much of the work in this task will be supported by a Metadata Working Group composed of project partners and metadata experts in a

variety of relevant formats. Based on the user needs defined in Task 1.2 and the ways the tools (WP3) may wish to make use of the data, required metadata enhancements will be evaluated by the partners in this WP, and, where possible, implemented.

The Europeana Foundation already has extensive experience with metadata enrichment - for example The European Library's linking of bibliographic records to trusted resources, as witnessed by the illustration below.



This project will further expand on this by linking data with resources available as Linked Open Data. The Europeana Connect project has identified a large number of relevant, complementary ontologies and vocabularies published as Linked Open Data. The Metadata Working Group will make a selection from these resources (and identify further resources that may become available during the life-time of this project). Appropriate metadata fields will be aligned with these vocabularies.

Additionally, all partners in this WP will collaborate to explore a variety of options for enriching metadata. After testing these possibilities for enriching the metadata, and evaluating their usefulness to researchers (in conjunction with WP1), the outcome will be a report and a plan on future directions for improving all the metadata in the Europeana Cloud.

CRN-ISTI will work towards strengthen the semantic relations between objects by mining and extracting the knowledge required to properly connect the Europeana objects, from external knowledge bases, specifically focussing on aligning with 'events'.

The Open University and DANS will use the content ingested in this project to develop methods to externalize links between textual documents based on citations, co-authorship, and semantic similarity.

Together with CERL, the Europeana Foundation will explore the possibility and impact of manual data curation of subsets of data or specific aspects of data. Unlike the explorations above, which explore horizontal enrichments of certain fields across the whole data or linking of families of records, this task will vertically look into the enrichment of a domain specific/service specific subset of data.



The Europeana Libraries project aligned metadata for monographs and serials with the Europeana Data Model (EDM), and the recommendations significantly improved and enhanced EDM. Continuing on from this, Task 4.4 (*Evolving the Europeana Data Model for research content*) will continue to align specific metadata with EDM. For this purpose, a Metadata Working Group, led by the Europeana Foundation, will be formed.

In the light of the metadata and content that will be provided in the context of this project, the working group will work to align metadata for research data and enhanced publications with the EDM. A report with recommendations for adapting EDM will be made available to the Europeana Foundation for review as part of their standard procedures for evolving EDM.

## **Work Package 5 - Sustaining the Europeana Cloud: Legal, Strategic and Economic Issues**

The adoption of all new technologies, particularly ones that take control away from one individual or organisation, create many barriers to adoption in the minds of the non-technologists. This work package will therefore investigate and help resolve the legal, strategic, security and economic issues that will underpin Europeana Cloud.

In WP5 stakeholder issues from the philosophical and perceptual to the legal and economic will be addressed in order to inform the technical development in WP2 and the business model supporting Europeana Cloud. WP1 Researchers will also inform these stakeholder requirements. A series of workshops and other knowledge gathering mechanisms will help to conceive, review and validate positions and technologies produced.

The early results of Task 5.1 (*Creating the high level principles*) will help inform the system architecture envisaged by WP2 providing context on the nature of connections between repositories of content. Using a set of questions delivered in WP2, Task 5.1 will attempt to provide a first set of principles to shape the architecture of the Europeana Cloud. Throughout the project the architecture will be reviewed against these overarching principles.

Digging deeper into stakeholders' philosophical and perceptual attitudes related to the creation of a cloud infrastructure, Task 5.2 (*Determining the practical requirements for the Europeana Cloud*) will also feed into the baseline technical requirements of WP2. At the same time it will develop the advocacy collateral needed to create buy in by the providers of content. Resolving the issues relating to security, to ownership and related organisational and business concerns will determine the success of Europeana Cloud in the long term. To try to deal with such issues Task 5.2 also digs into the risks and rewards, the perceptions and difficulties of holding institutional content in a cloud. Together with the main stakeholders it will also create the rules of engagement for users of the cloud.

The establishment of a Europeana Network Task Force is envisaged to shape the long-term governance of the cloud and to be able to make decisions on future issues of the kind uncovered under task 5.2. The aim is to provide arguments to deal with questions such as:

What are the security issues? How does one protect the cloud from unauthorised entry? How are the required levels of reliability built into the system? How does one create trust amongst providers? What is the impact of national and EU legal frameworks? How does one configure the system to achieve the best cost efficiencies? What is the level of contribution different members must make?

What are the maximum levels of usage that a member may make? These likely concerns of providers will be discussed and resolved via facilitated workshops.

Dealing with content, even if it is just for research purposes under this project, brings a whole new set of IPR issues. The Europeana Licensing Framework needs extending to cover the conditions under which providers are happy to allow re-use of their content. The use of a cloud infrastructure may also require other IPR concepts. Task 5.3 (*Exploring Licensing Issues*) will, together with the Europeana Network, work out the issues that need to be resolved and start the process of resolving them. The methodology will use a taskforce to establish the issues, some investigative research on the IPR barriers, followed by some additions to the Europeana Licensing Framework with buy in from the Europeana Network of content providers and others contributing to research. The task will have an impact on WP4 for metadata fields and WP2 software development in relation to the architecture.

Europeana Foundation is hoping to be funded under the Connecting Europe Facility.<sup>8</sup> Part of this funding is for the core platform which should include some of the costs of sustaining a cloud storage infrastructure, preservation and an access solution for all players in the European information space. Task 5.4 (*Sustainability, Governance and the Business Model*) will establish the business model required to sustain such an infrastructure bearing in mind the various strands of funding. It will make recommendations on the streamlining and de-duplicating of European funded infrastructures to deliver content.

Using the technical outcomes of WP2 to say what can be done, the business model will be arrived at through a series of consultations with the partners in Europeana Cloud and via the Europeana Network. It will also involve private companies who may be responsible for the long-term hosting and derive a cost model for participation in the cloud by providers and developers. The consultations will produce a cost/benefit model for use in communicating the widespread use and take up of the Europeana Cloud by the aggregators of content, providers of tools and services, and the networks dependent on more accessible / affordable technical infrastructures.

Using the outcomes of Tasks 5.1 and 5.2 and the Europeana Network Task Force for future issue resolution, this task will propose a governance structure for the Europeana Cloud, that works within the structure of the Europeana Foundation. Communicating the benefits of the cloud will be done in conjunction with WP6 and will be based on a white paper that details the cost benefits of a Europeana Cloud

Sustaining the Europeana Cloud will require wider participation than just the project partners. A roadmap for incorporation and a business plan based on the business model and cost benefit work of Task 5.4 will be developed in Task 5.5 (*Planning for other Europeana related aggregators to become part of Europeana Cloud*). It aims at bringing new aggregators and providers into the Europeana Cloud. This plan will focus on two groups: Current aggregators both national and domain. This group is already part of the Europeana ecosystem (such as BHL-Europe, OpenUp! etc.). The second group is research stakeholders/aggregators, who are unknown to Europeana ecosystem but potentially could be part of the Europeana Cloud. Task 5.5 will also deliver an advocacy programme will follow that includes the creation and provision of case studies, white papers; videos etc to explain the benefits and issues of placing content into the cloud.

<sup>8</sup> <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/11/1200>

## Work Package 6 – Dissemination and Networking

The Europeana Cloud project involves communication with a significant range of stakeholders. WP1 will be engaging with the research communities within the humanities and social sciences, while WP5 will be communicating with the Europeana Network of aggregators and content providers.

WP6, led by University College London, will have a broader role ensuring there is harmonisation in the communication work undertaken elsewhere, but also disseminating the broader discoveries made within the project as a whole. This WP brings together the leading networks that are involved in the project. It will produce arguments that lead to strategic harmonisation between these networks and and the unified dissemination of the project outputs

Task 6.1 (*Stakeholder Engagement and Infrastructure Plan*) is at the core of this WP. A Stakeholder Engagement Plan, designed by UCL in consultation with all the other relevant partners, will provide oversight over the communication work occurring elsewhere.

Task 6.2 (*Sustainable Communications Infrastructure between European Research Networks*) takes a strategic look at the relationship between the network partners involved in Europeana Cloud. The development of infrastructures for researchers in the humanities and social sciences is now a complex space with the possibility of overlap and duplication without suitable co-ordination. Task 6.2 will therefore see the creation of a European Research Co-ordinators Group (comprising DARIAH, LIBER, Europeana, CESSDA and other invited organisations) that will last beyond the end of the project and help inform future strategic direction in this space. This will also assist in shaping the future engagement of researchers of the Europeana research platform beyond the project lifetime.

Tasks 6.3 (*Europeana Content Aggregators Communications*) and 6.4 (*Researcher Communication Plan*) make sure that communications and dissemination of the work done in the project is communicated to the researchers themselves and to those providing their content for reuse. WP1 is playing a significant but specific role in assessing and engaging with researchers. Therefore Task 6.4 has the role of broadcasting more widely to other researcher communities..

Task 6.5 (*Promoting the Europeana Cloud*) has the role of broadcasting even more widely. The cloud model is at the cutting edge of digital library technologies and a dissemination plan will involve attending and speaking at pertinent events, as well as communicating the benefits of this cloud infrastructure to governments and funders. Also the communities of software developers for the research industry and the community of people interested in IPR issues will be addressed by this task.

Task 6.6 (*Project results dissemination*) will provide the more traditional projects results dissemination tasks – making sure that the results of the project get known to the relevant parties using appropriate channels.

## Work package 7 - Project Management and Coordination

This WP will co-ordinate the work of Europeana Cloud and monitor progress to maintain focus on successful delivery of the expected results and on the accomplishment of the objectives, on time and to budget. It will operate the Best Practice Network (BPN) and the deliver all results to a high level of

quality. As well as supervising the project's management and decision-making procedures it will also evaluate progress and deliverables against promise.

It will run on Prince II guidelines, managing largely by exception whilst ensuring the contract complies with the Commission's reporting requirements. It provides the budgetary control and financial management for the project and keeps all the work of the project in line with EU Copyright and IPR requirements and the existing and emerging Agreements of Europeana.

## **Special Clauses**

### Europeana Data Exchange Agreement

All *beneficiaries* submitting metadata to Europeana shall do so pursuant to the Europeana Data Exchange Agreement (hereinafter 'DEA'). Metadata submitted to Europeana shall be released as Open Data in accordance with the terms of the DEA. This requires that the IPR status of the digital objects thus made accessible is described by appropriate rights labels attached to them to allow users to know what uses they are allowed to make of the object. Such objects shall be labelled in accordance with the '**Europeana Rights Guidelines**' available at <http://pro.europeana.eu/web/guest/technical-requirements>.

Those beneficiaries submitting content will be working under a refined version of the Euoprana Licencing Framework, as determined in WP5

### Europeana Brand

The *consortium* shall put a standard Europeana logo with a link to the Europeana portal in a visible area of the project website.

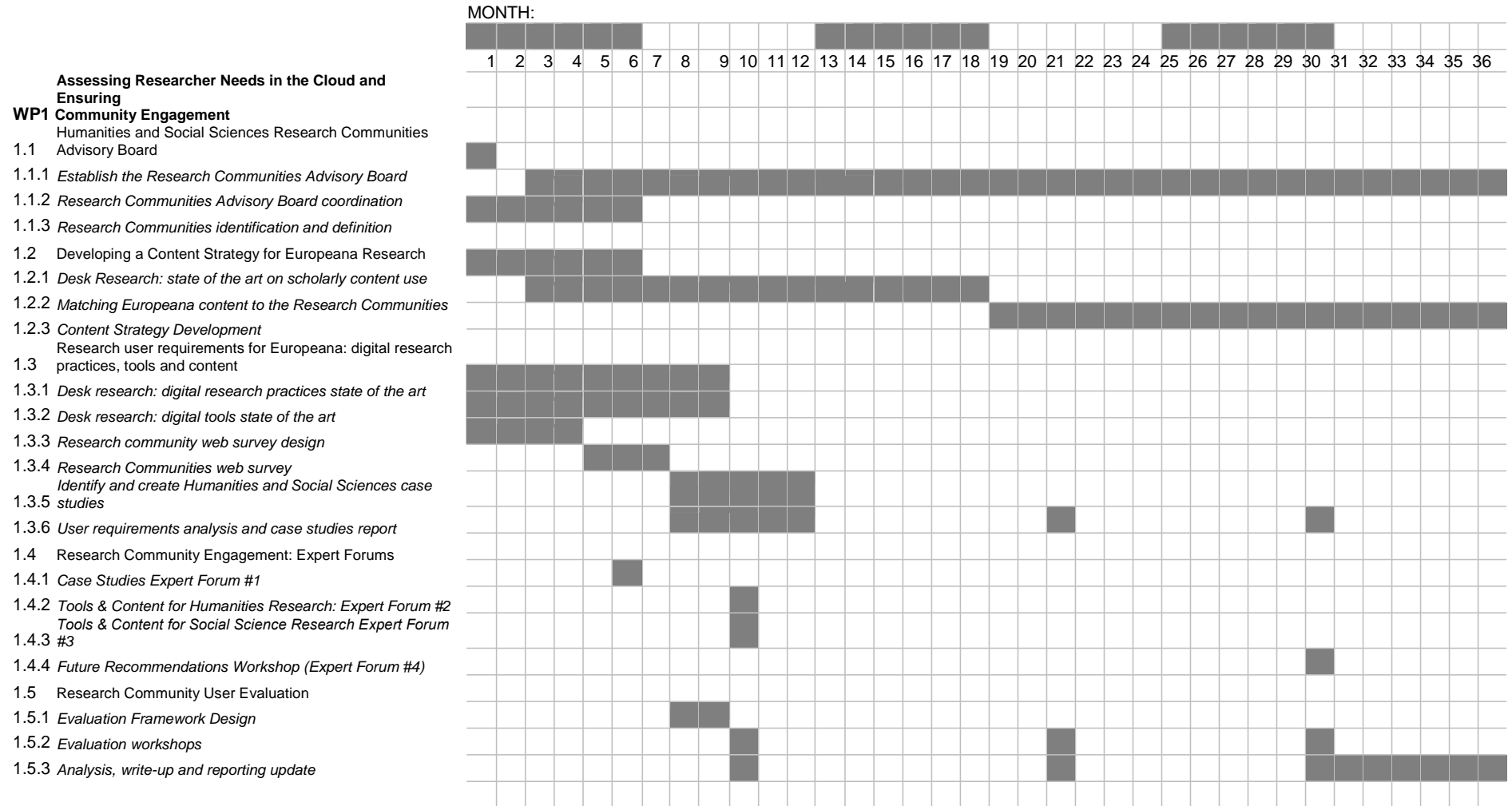
All *beneficiaries* providing content, services or technology to Europeana shall put a standard Europeana logo on their organisation's home page with a link to the Europeana portal.

*Beneficiaries* shall follow the provisions of the '**Guide to Usage of the Europeana Brand**' published at <http://pro.europeana.eu/web/guest/about/comms-tools/brand-guidelines>.

### Dissemination and awareness

*Beneficiaries* shall promote Europeana as part of their usual dissemination activities. Moreover, they shall reconcile the consortium's awareness and dissemination activities for the project with Europeana and Europeana's own dissemination and awareness activities, provided to them by the Europeana office upon request.

## **B3.2b. Work plan – GANTT CHART**



Europeana Cloud – Description of Work Amendment No. 01

**WP2 Developing the Infrastructure for Europeana Cloud**

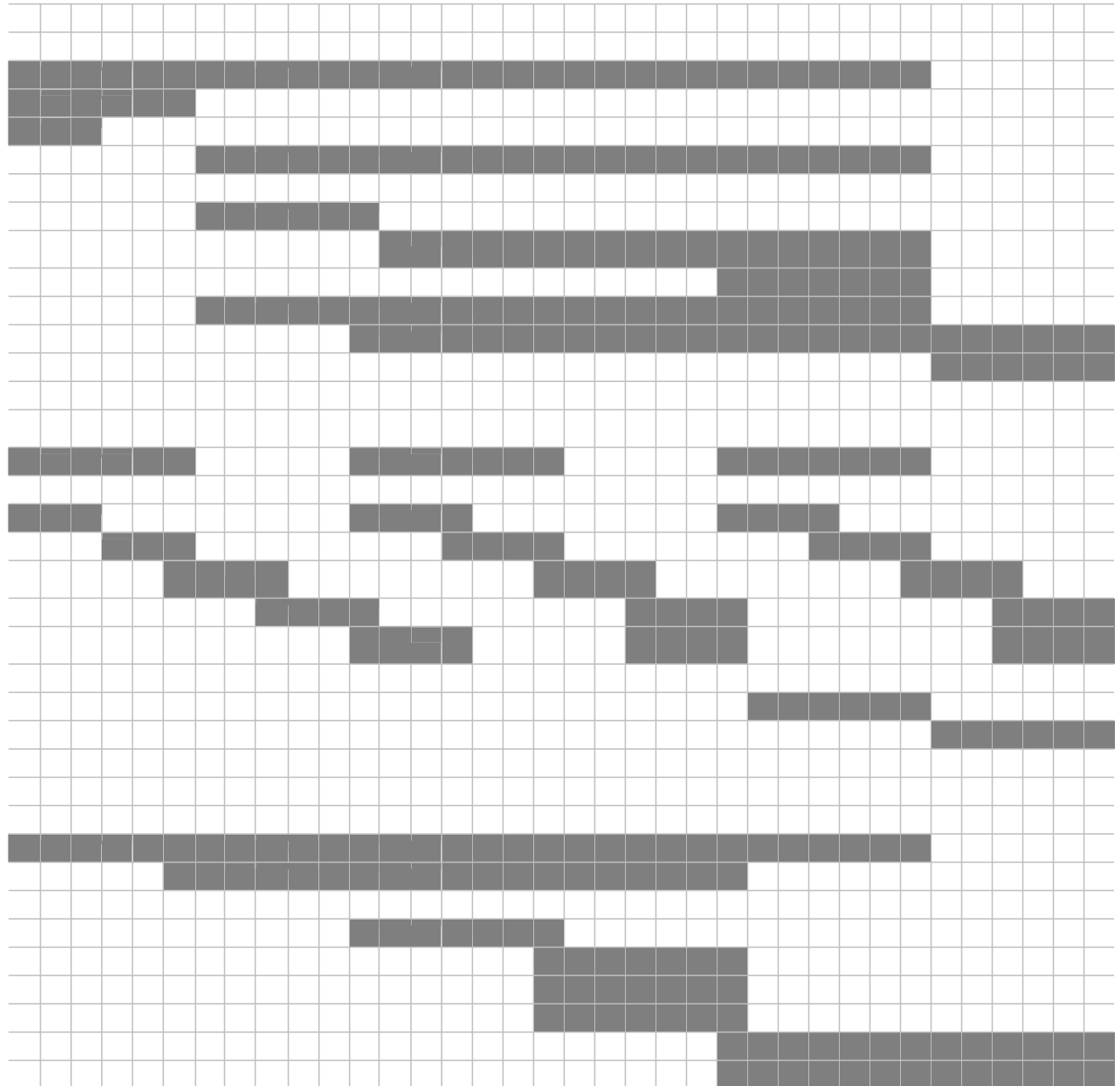
- 2.1 Requirements Gathering and Evaluation of Technologies
  - 2.1.1 *Create and Iterate Architectural Design Document*
  - 2.1.2 *Evaluation of available cloud technologies*
  - 2.1.3 *Set up and configure the development environment*
- 2.2 Prototype Development for Metadata Cloud
- 2.3 Prototype Development for Content Cloud
  - 2.3.1 *Integration of content documents into the cloud*
  - 2.3.2 *Adaptation of content cloud to meet performance and scalability requirements for large amounts of content*
  - 2.3.3 *Implementation of legal requirements from WP5*
- 2.4 Bidirectional Metadata and Content Access
- 2.5 Service Platform and Execution API
- 2.6 Evaluations and Migration to Cloud

**Exploiting Europeana Cloud with services and tools for researchers**

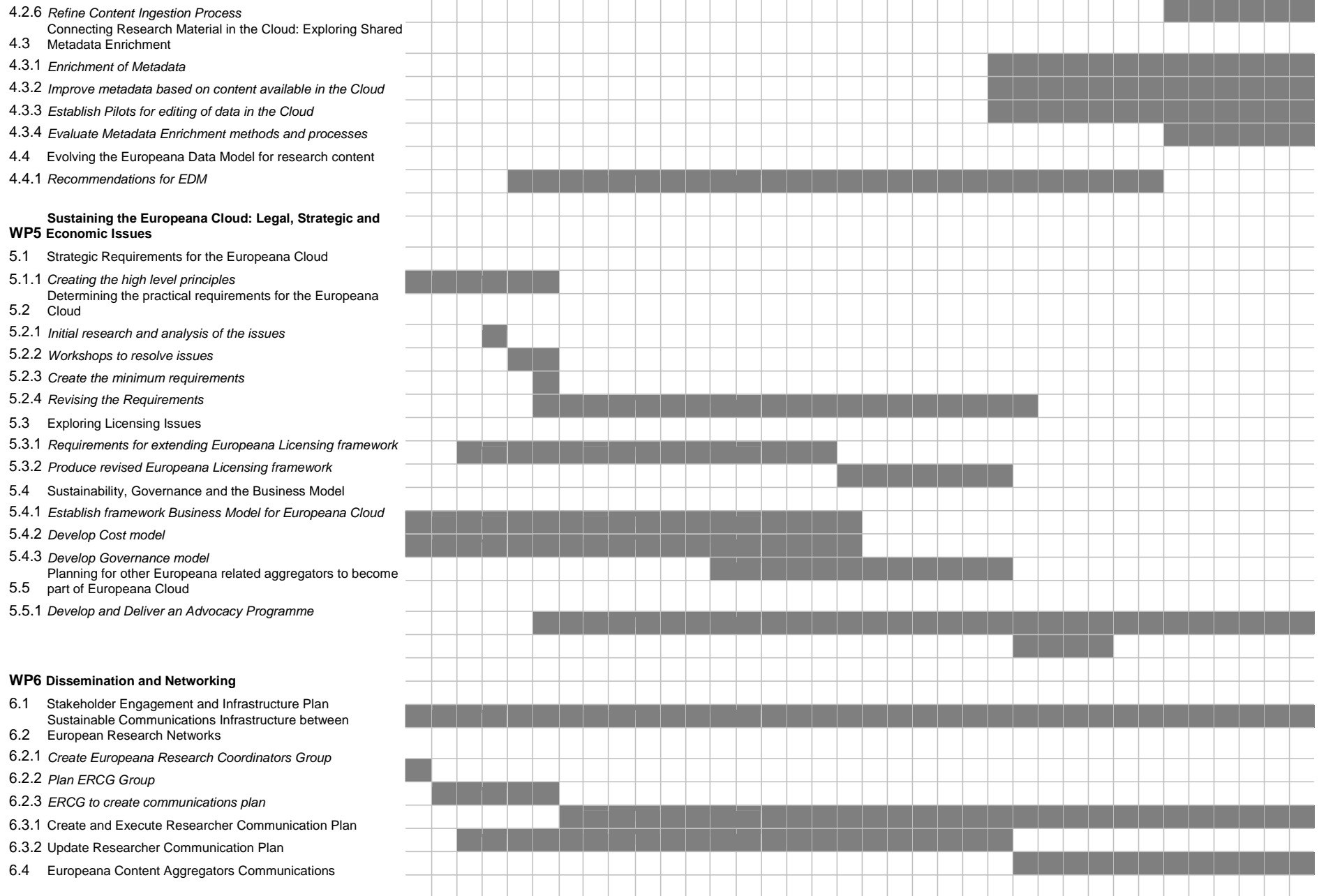
- WP3**
- 3.1 Personas, Scenarios and Use Cases
  - 3.2 Iterative design, development and evaluation of tools
    - 3.2.1 *Initial brainstorming and scenario building*
    - 3.2.2 *Paper prototypes to gather initial feedback on early ideas*
    - 3.2.3 *Gradual development of more functional digital prototypes in rapid iteration cycles*
    - 3.2.4 *Deployment of final implementations in realistic testbeds*
    - 3.2.5 *Evaluation of technical integration of tools with Europeana Content*
  - 3.3 Further development of the Europeana Research Portal
    - 3.3.1 *Develop Plan Europeana Research Platform*
    - 3.3.2 *Establish Evolved Version of Europeana Research Platform*

**WP4 Ingestion of Content and Metadata Development**

- 4.1 Ingestion of Metadata into Europeana
  - 4.1.1 *Create and Iterate Content Ingestion Plan*
  - 4.1.2 *Metadata Ingestion Clinics*
- 4.2 Ingestion of Content for Research directly into the Cloud
  - 4.2.1 *Ingest Sample Content into Cloud*
  - 4.2.2 *Building Additional Tools for Content Ingestion*
  - 4.2.2 *Create Content Ingestion Plan*
  - 4.2.3 *Approaching Europeana Network for Content*
  - 4.2.4 *Create and Update Content Ingestion Plan*
  - 4.2.5 *Execute Content Ingestion Plan*



Europeana Cloud – Description of Work Amendment No. 01







### B3.2b. Work plan – Performance Monitoring Table

Describe specific and realistic indicators which you will use to measure the progress towards the achievement of the project's objectives at different stages in the project lifetime. These indicators should be stated in quantifiable form based on absolute values, not percentages. Indicators should anticipate the project's progress and not be limited to simple technical aspects (e.g. number of project web site hits). Indicators should relate to areas under control by the project and not to outside factors (e.g. number of users of a service in countries that are not targeted by the project). Explain how indicators will be measured and by whom. (Use table 6 template).

Indicator No.	Relating to which project objective / expected result?	Indicator	Method of measurement	Expected Progress			
					Year 1	Year 2	Year 3
1.1	Increase knowledge of Europeana amongst researchers	Greater knowledge of Europeana amongst sample of researchers	User survey [M12,36]	20% of users surveyed	-	90%	
1.2	Increase use of Europeana amongst researchers	Greater use of Europeana amongst sample of researchers	User survey [M12,36]	10% of users surveyed	-	50%	
2.1	Cloud-based infrastructure for European metadata	Acceptance of deliverable by M30	Agreement of Steering Group of Europeana Cloud	First prototype available	Second prototype available	Final service functioning	
2.2	Cloud-based infrastructure for Europeana content	Acceptance of deliverable by M30	Agreement of Steering Group of Europeana Cloud	-	First prototype available	Pilot system available	
3.1	Successful interaction between 3rd party tools and Europeana content	Acceptance by WP3 partners	Evaluation by WP3 partners [M12,24,36]	First evaluation of tools	Second evaluation of tools	Third evaluation of tools	
3.2	Completion of European Research Portal	Acceptance of deliverable by M18	Agreement via Steering Group of Europeana Cloud	n/a	n/a	n/a	
4.1	Increase the extent and range of overall metadata in Europeana	Number of metadata records pertaining to items	Each metadata record in Europeana is counted	0.2m	1.0m	2.4m	
4.2	Increase in research- focused content (datasets, monographs and other research content) in Europeana	Number of individual digitised objects ingested into Europeana	Each individual digital object in Europeana will be recorded	-	1.5m	5m	
5.1	Revised Europeana Licensing Framework	Acceptance of deliverable by M18	Agreement of Steering Group of Europeana Cloud	Draft produced	Final Document	-	
5.2	Europeana Cloud	Acceptance of	Agreement of	-	Underlying	Final	

	Roadmap and Business Plan	deliverable by M28	Steering Group of Europeana Cloud		governance model produced	Document produced
5.3	Governance Structure for Europeana Cloud	Acceptance of deliverable by M24	Agreement of Steering Group of Europeana Cloud	-	Governance model produced	-

The results of performance measurement and evaluation (indicators and their values) will be part of the progress reporting to the Commission.



### **B3.3. Project management**

*Describe the organisational structure and decision-making mechanisms of the project. Show how they are matched to the complexity and scale of the project.*

*Organisational and change management should be properly addressed in the Best Practice Network proposal, with a detailed specification of the approach and methods to be used.*

Europeana Cloud will be managed through well-established project management components and techniques by a Project Management Group (PMG), consisting of the Project Coordinator: The Europeana Foundation and the Project Manager: MDR Partners.

In Europeana Cloud the Europeana Foundation, the Project Coordinator, will work to ensure smooth and effective project delivery as they have in the past for other projects related to the development of Europeana and The European Library, including Europeana Libraries, Europeana Awareness, Europeana Version 2.0., TELplus, EDL etc . The management structure is complemented by the presence of the Vice-President of LIBER (UCL) on the Executive Board (see below) and representatives of CERL (Council of European Libraries), DARIAH (Digital Research Infrastructure for the Arts and Humanities), CESSDA (Council of European Social Science Archives) , and two institutes of the Royal Netherlands Academy of Arts and Sciences (KNAW): DANS (Data Archiving and Networked Services) and NIOD (The Institute for War, Holocaust and Genocide Studies) in the Work Package groups ensuring buy-in and effective communication with both the content-providers and the research communities.

The Europeana Foundation has a long record of successful involvement in development projects and is obviously centrally involved in the strategic development of Europeana. The project management structure of Europeana Cloud follows the principles of PRINCE II and product-based planning, delegation of responsibility and exception-based reporting and is designed to ensure coherent administrative, financial and technical coordination, while providing the participants with the support and tools required for the achievement of the project objectives.

The Project Manager, MDR Partners has almost 20 years of experience of managing successful digital libraries projects at European level, including several in the Europeana project ' family', Europeana Libraries, PATHS, EuropeanaLocal, and CARARE.

The Europeana Foundation and MDR Partners will work closely together to ensure smooth and effective project delivery. The management arrangements in Europeana Cloud together with the Project Plan will provide a safe, effective and flexible environment for the activities of the project. Many of the partners have previously worked together, so the project profits from (but does not rely on) good personal relationships from the outset.

The management structure will:

- establish reliable coordination and efficient communication between partners and stakeholders with ensure timely and accurate handling of administrative and financial tasks
- monitor, coordinate and report on the progress of the work packages and support integration of their activities;
- provide equitable and effective methods for taking decisions and resolving conflicts;
- ensure compliance with the Consortium Agreement
- coordinate and support each partner's own management responsibilities;

#### **Project management Group**

The Project Management Group (PMG) will be responsible for the day-to day management of the project under the guidance of the Executive Board. It will consist of representatives of the Project Coordinator and the Project Manager. The PMG will meet monthly in advance of Executive Board meetings and more often if required.

### **Executive Board**

An Executive Board (EB) will be established to manage and direct the overall development of the project and its technological objectives. It will promote and assess the quality of the work; define mechanisms for implementing major technical decisions; identify the need for significant changes in the work plan and oversee the delivery of all work packages.

The EB will be composed of the Project Coordinator and the Project Manager together with all Work Package Leaders. The Coordinator will convene and chair the meetings of the EB which will meet monthly, usually by means of teleconference although there will be up to 2 physical meetings a year, timed where possible to coincide with other project events.

The EB will monitor the technical direction of the project and review and/or amend the work plan as required, approve major technical decisions, recommend financial and other resource allocation and approve periodic and final progress reports. It will:

- define the schedule of project activities;
- support the Coordinator in evaluating and validating the progress of the project;
- identify project-level risks, track them, and propose corrective action in the event of problems;
- establish ad-hoc working groups as required;
- assign specific responsibility to the most suitable partner when new events require it;
- support the Project Coordinator in reporting progress to the General Assembly;
- support the Project Coordinator and the Project Manager in coordinating the project's efforts for review meetings.

Business will be despatched by consensus between the EB members, but if voting is necessary, decisions will be made by a majority vote. In case of a tie, the PC will have the casting vote

### **General Assembly**

The General Assembly (GA) provides strategic governance for the project. It provides a fair means of considering issues that impact the contractual position of one or more partners such as redistribution of grant, reallocation of work or termination.

The GA will be composed of one senior representative from each of the partner organisations with the necessary delegated authority to make decisions on behalf of their organisation with respect to the project. The Project Coordinator will convene and chair the meetings of the GA.

The GA will receive and approve reports on progress from the EB and PC and will consider major issues which may have arisen and which impact the future direction of the project. The GA will deal with outcomes of peer reviews, budget revisions or amendments to the project's work programme and has a communications and team building function of at least equal importance to its executive function.

The GA will meet in month 1 for the kick-off meeting, and then as necessary for the conduct of business: for example it will meet at the mid-term plenary to consider the project's progress to date and to guide the second half of the project. The annual meeting will ratify any proposed changes to the work plan. Between annual meetings, the GA will meet as required by Skype or teleconference or may be consulted electronically to resolve urgent issues that may arise (e.g., relating either to its role in Conflict Resolution or issues with the content partners).

Business will be dispatched by consensus between the GA members, but if voting is necessary, each partner will have one vote. Decisions will be made by a majority vote. In case of a tie, the Coordinator will have the casting vote.

**The Steering Group (SG) will** provide advice and guidance on the general direction of the project and provide advice to the Project Management Group and Workpackage (WP) Leaders as required. It will track the overall progress of the project and suggest amendments to the work plan as required. The Group will also help the project coordinate its work with that of other related projects, notably the development of the Europeana Research portal. The Steering Group will be made up of the Coordinator and The European Library Board. It will discuss eCloud as a standing item on The European Library Management Board's regular six monthly meetings, or more frequently if required, possibly via electronic means.

### **Content Coordination Group**

In a complex project such as this there are also linkages and interdependencies between the various Work Packages which need to be carefully planned and managed if the project is to succeed. For this reason a content coordination group will be established, led by the Europeana Foundation, to harmonise activity and outputs across Work Packages 1,2,3,4 and 5. It is envisaged that the content coordination group will meet by remote means on a monthly basis and will be attended by the PC, PM and relevant WP Leaders. Other partners may be invited to report/contribute as required.

There are three sets of requirements being gathered in the Europeana Cloud project Researcher Needs (WP1), Technical Requirements (WP2) and Strategic Requirements (WP5) Each of these will inform other work packages in the project, creating linkages and interdependencies. They are articulated below.

In terms of defining research use requirements for the tools and services for Europeana Cloud Work Package 1 plays a crucial role for other WPs

- The first iteration of the Content Strategy (as defined by WP1.2 in M18) informs WP4.2.3 in which the Europeana Foundation approaches its existing network, and potentially other providers, for content suitable for academic use
- The Expert Fora held in WP1.5 (M6, 10, 10), along with the Personas, Scenarios and Use Cases of WP3.1 will shape and provide feedback for the tools development taking place in WP3.2 throughout the lifetime of the project. This will be a two way loop with the tools being sent to WP3 for feedback
- The Export Fora will also help shape WP3.4, which will plan and develop the Europeana Research Portal for the length of the project and beyond.

Technical developments within Work Package 2 need to be finalised before the work of other Work Packages can begin

- APIs developed in WP2.5 need to be ready in M9 for WP3.2.4. Potentially further iterations of APIs will feed into WP3 as well
- The development of the Europeana Cloud infrastructure in WP2 feeds into WP4. In particular WPs 2.2 and 2.3 need to have developed to a sufficient level to allow for the ingestion process in WP4 to begin

The strategic and business needs of Europeana Cloud will be defined in WP5. They will have a strong input into the technical infrastructure being developed in WP2. In particular

- The high-level principles of WP5.1 will provide a basic architectural outline of the technical development of Europeana Cloud

- The understandings developed in WP5.2, 5.3 and 5.4 will further define the technical shape of Europeana Cloud, which is being developed under an iterative process in WP2. Additionally, technical possibilities and restrictions investigated in WP2 will also inform WP5

### **Work Package Leaders**

Each work package is led by a Work Package Leader who is responsible for overseeing the work package activities and for reporting to the Executive Board and to the Project Management Group. For each work package within its remit, its Work Package Leader will:

- monitor progress towards the deliverables defined in the work plan and ensure that the deadlines for milestones are met;
- be responsible for the performance of the work package and guarantee accomplishment of the objectives;
- provide regular reports, control the quality and the schedule of work;
- identify work package level risks, track them, and propose corrective actions in the event of problems;
- if reallocation of resources between members of the work package or between deliverables is needed, make appropriate recommendations to the Project Management Group;
- maintain an archive of the results obtained within their work package (both intermediate and final) which will include all working drafts (latest version), the work package deliverables, and minutes of the work package meetings.

Recommendations for changes to the schedule for deliverables or work package resourcing will be submitted to the Executive Board, of which all the Work Package Leaders are members. Work Package Leaders will convene in physical, Skype or teleconference conference meetings with their work package participants when necessary and in consultation with the Project Coordinator. Wherever possible such meetings will be linked to other events. To retain operational flexibility and efficiency no specific pattern is established for these meetings at the planning stage, but budget has been included for such meetings in each appropriate work package. Work Package Leaders are responsible for ensuring that such events are adequately documented.

### **Content Coordination Group**

In a complex project such as this there are also linkages and interdependencies between the various Work Packages which need to be carefully planned and managed if the project is to succeed. For this reason a content coordination group will be established, led by the Europeana Foundation, to harmonise activity and outputs across Work Packages 1,2,3,4 and 5. It is envisaged that the content coordination group will meet by remote means on a monthly basis and will be attended by the PC, PM and relevant WP Leaders. Other partners may be invited to report/contribute as required.

### **Appraisal Group**

The Appraisal Group will consist of the Project Coordinator, Project Manager, and representatives of the project partners and/or external experts to be appointed by the Project Coordinator in consultation with the Executive Board. The Appraisal Group will quality control the project deliverables. Comments of the group will be taken into account when finalising project deliverables.

Members of the Appraisal Group will not comment on deliverables for which they are responsible. Disagreements will be resolved by negotiation or by a majority verdict as last resort. The group will communicate via email or other electronic means. If necessary, the group will hold Skype or teleconference meetings. No physical meetings of this group are foreseen.

### **Project communication mechanisms**

Good communication is at the heart of the project. A project basecamp facility (including email lists and file storage/library) will be established from the outset and all project documents will be available to download by all partners from the project's website, which will be part of the Europeana Professional site.

### **Flow of Information**

The information originating from the project may have a specialised or a managerial nature. Concerning the specialised issues, flow of information will be achieved through:

- work package meetings, Skype or teleconferences of key work package participants and activities to be held as necessary for the execution of the work plan;
- telecommunication and online communication (Email, Chat, Skype; etc.) to support collaborative work and resolve problems;
- the project internal email list;
- the Europeana Cloud section of the Europeana Professional website
- the project internal website - in Basecamp (see below);
- news and information posted to the website, blog or newsletter;
- concertation activities with CIP projects and events.

As far as managerial, administrative and financial issues are concerned communication and flow of information will be achieved through:

- very regular communication between the Project Coordinator, Project Manager and Executive Board;
- meetings of the Executive Board;
- distribution of reports by the Work Package Leaders and the Project Coordinator.

### **Project Internal website**

The Project Internal Website will be used to exchange information among partners via an internal forum and to store information. The consortium will use Basecamp to manage content and support collaboration and communication. The internal website will be closely linked to The European Library management site and to the collaborative working site of *Europeana.eu*

### **Planning and Reporting**

The foreseen procedures and tools for Europeana Cloud are:

- All formal meetings will be announced at least two weeks in advance. Agenda, proposed resolutions, required decisions and supporting documentation will be available to all attendees at least 1 week before the meeting. All documents will be issued via the chair that is responsible for compiling all submissions from partners.
- All meetings will be formally minuted and minutes will be produced in a timely manner.
- Due to the importance of documentation produced by the project (interim reports, cost statements, working papers, and deliverables), the Project Office at Europeana Foundation will be responsible for maintaining all document libraries.
- The necessary infrastructure to maintain these libraries will be based on the project internal website.
- Coordination of knowledge management and other innovation-related activities will be undertaken at work package level by the Work Package Leaders and at consortium level by the Project Management Group.

### **Conflict Resolution**



The primary mechanism for decision-making throughout all groups within the project will be by consensus (defined as a lack of sustained opposition to a decision); however, where consensus cannot be reached, it is essential that processes should be available to resolve disagreements. Conflicts may relate to differences in priorities, resource allocation, technology choices, ways of working, or expectations of results. The conflict resolution mechanism described below reflects the overall project management structure and philosophy of devolved responsibility.

The primary aims are:

- To minimise the impact of any disagreement and to localise its effect.
- To ensure the speediest possible resolution of disagreements.

*Disputes localised within a work package:* Where there is sustained disagreement within a work package, which the Work Package Leader is unable to mediate, the Project Coordinator will be invited to mediate and in the absence of consensus, the Executive Board shall be invited to mediate.

*Disputes between work packages:* Conflicts between work packages shall, in the first instance, be mediated by the Project Coordinator through the Executive Board. If the Executive Board is unable to reach consensus, the disagreement shall be referred to the General Assembly.

*Conflicts between a work package and the Project Coordinator* shall be managed in the same way as disputes between work packages, except that the Executive Board shall elect a chairperson to temporarily replace the Project Coordinator in that role.

*Disputes between institutions:* Conflicts between the Project Coordinator and a Partner, or between Partners, shall be referred directly to the General Assembly (although the Project Coordinator may first be invited to mediate disputes between Partners).

The General Assembly shall be the final point of decision for internal resolution of all conflicts. Within both its own areas of competence, and in acting as the point of appeal from decisions of the Executive Board, it shall always seek to make decisions by consensus.

### **Quality Assurance and Risk Management**

The Quality methodologies and procedures applied will be in line with standard Quality Assurance procedures. In particular they will refer to:

- organisation of the working team,
- roles and responsibilities of each participant,
- control actions planned,
- time schedules.

Requirement specifications and quality objectives will be clearly defined and documented.

Responsibilities and authorities will be clearly defined. The work programme allocates clear, single-organisation responsibility for each task, even where the responsible organisation has to coordinate inputs from other participants. Development, quality, testing, configuration, acceptance and maintenance plans will be defined and controlled. Agreed definitions of procedures for acceptance and quality control will be established. Appropriate tools for planning, monitoring and progress reporting will be used. A standard tool for reporting will be selected.

Quality control of deliverables and certain milestones will be undertaken by the Appraisal Group. Appropriate deliverables (and in some case, milestones) will be sent to this group for review and appraisal and their comments will be taken into account in finalising the deliverables. Members of the

Appraisal Group will not comment on deliverables for which they are responsible. Disagreements will be resolved by negotiation or by a majority verdict as a last resort.

The Project Manager, working with the Executive Board and Work Package Leaders, will maintain a risk register and an issues log, which will be updated throughout the project. The Executive Board will be responsible for identifying project level risks, monitoring them and agreeing mitigating action, whilst Work Package Leaders will do the same for Work Package risks. The risk register and issues log will be discussed during meetings of both Executive Board and Work Package meetings.

### **B3.4 Security, privacy, inclusiveness, interoperability; standards and open-source**

*State clearly how interoperability between products and services from different sources will be ensured and, where appropriate, how interconnection and interoperability of networks and services will be achieved. State any security and privacy issues involved in the proposed service, and, if so, how they are addressed in the proposal.*

*The main standards being used should be identified. The proposal must (where applicable) clearly identify where a proprietary approach is used and the reasons for its use.*

*Proposals addressing problems connected with standardisation or regulation should explain what these problems are and how they will be addressed.*

*Describe the inclusiveness and accessibility of the service, both by its nature and the way it shall be provided.*

The issues highlighted in this section are crucial to Europeana Cloud. There are issues of interoperability that refer both to the development of Europeana Cloud, but also issues of interoperability that relate to the metadata that describes the research-focused content being aggregated.

#### **Interoperability of the Cloud**

The infrastructure created will allow for the immediate interconnection and interoperability of partners within Europeana Cloud. In fact, one of the key objectives of the project is to create aggregators that are instantaneously connected to one another via this single infrastructure, rather than having to go through the process of sharing and transferring data over multiple systems.

Within WP2, a number of potential cloud-based software solutions will be examined before selecting a single product for deployment throughout the partners' systems. The solution chosen will need to meet a number of criteria to ensure that it can be taken up by not just the relevant partners in the project, but also by the broader Europeana Network of aggregators once the project has completed.

Addressing the security and privacy issues will also be a crucial part of Europeana Cloud. Because of the distributed nature of the cloud and its ability to move content across national boundaries, it needs to take into account those legal frameworks established at a national and international level, ensuring states' conventions about the movement of digital content are respected. WP5 of Europeana Cloud will explore this issue in depth, investigating the feasibility of sharing metadata and content within the cloud in the light of such legal frameworks. Relatedly, WP5 will also address issues of privacy, ensuring that Europeana Cloud is a protected space that cannot be penetrated by others from outside the network. This in turn will affect the precise technical configuration, e.g. how an authentication system is arranged so as to restrict access to its partners.

#### **Interoperability of Metadata**

Given the new types of content and the new types of provider, the Europeana Cloud project will also need to deal with the interoperability of the metadata that describes this diverse content. WP4 will be dealing with this issue. It will make use of the Europeana Data Model as a central point around which to structure other forms of metadata. Expertise will be drawn from the Europeana Foundation, but also from metadata experts in the other fields. Allying the content ingested in Europeana Cloud with the EDM model will permit its discoverability and usage within the Europeana Research Portal.

#### **Open Standards and Open Source**

Europeana Libraries does not take a proprietary approach to standards or software development. The software already available in Europeana Labs will be reused and further developed wherever possible.

Other software developed as part of the project will also be shared within the Europeana network and beyond.

### **Main standards in use**

As in common practice at Europeana, the project will harvest a larger variety of standards from partners for content and metadata. It will use the following standards to ingest, unify and process the metadata and content.

- Europeana Data Model (EDM)
- Open Archive Initiative Protocol for Metadata Harvesting (OAI-PMH)
- Open Archival Information System (OAIS)

### **Accessibility and Inclusivity**

The Europeana Research portal will comply with the W3C Web Content Accessibility Guidelines. These guidelines explain how to make websites accessible to people with visual disabilities. Conformance to these guidelines will help make the Web more accessible to users with disabilities and will benefit all users. Europeana Research will also make use of the Language Policy of the Europeana Foundation to ensure that it is accessible for all citizens across Europe.

### **B3.5 Resources to be committed**

*In addition to the costs indicated on form A3 of the proposal, and the summary of staff effort shown in B3.1b. table 4 above, please identify and substantiate any other major cost items (e.g. equipment, software, subcontracting). Describe how the totality of the necessary resources will be mobilised, including any resources that will complement the EC contribution. Show how the resources will be integrated in a coherent way, and show how the overall financial plan for the project is adequate.*

*For personnel costs only the actual monthly rate needs to be given here, as the rationale on the amount of effort should be given in the project work plan. For “subcontracting” and “other costs” a detailed breakdown and rationale must be given here.*

### **Subcontracting**

WP4 Leaders CERL will subcontract the Data Conversion Group for €16,240 to provide assistance for their metadata enrichment task in WP4.3

CERL has employed the Data Conversion Group (DCG) , based at the University of Gottingen, under the terms of a frame work contract since 1998, which has recently been extended until 2015. CERL employs no other technical staff. DCG is responsible for all data preparation of the various CERL databases and hosts, maintains, and develops the CERL Thesaurus and the Material Evidence in Incunabula databases. DCG would be involved in Task 4.3.3.b, where it would act on behalf of CERL to enhance data harvested within the project with the aid of pre-existing data available in various CERL digital resources.

As part of WP5, the Europeana Foundation wishes to subcontract to a total amount of €30,000. This will enable Lucie Guibault, Institute for Information Law, University of Amsterdam, to assist in tackling the licencing issues in WP5. In particular this will provide the project with a lawyer with appropriate legal qualifications to add to the legal expertise provided by project partners Kennisland.

The work will take place within Task 5.3, under the supervision of the Europeana Foundation. The particular tasks of Lucie Guibault will be to test the revised Europeana Licencing Framework against national and European law to ensure its fitness for purpose.

## Travel

The calculation of travel costs is based on an estimate of €750 per journey for the partners taking part in the activity. Travel costs total some €209,200, across the consortium. Projected events and meetings are listed in the table below. Travel costs are based on an estimated 279 journeys in all, spread across the consortium as appropriate. For example, it is anticipated that only content providing partners will attend the 3 workshops, although as far as possible these will be co-located with other meetings for efficiency and so as to enable other partners to attend if desired.

WP	Events	Month	Attendees	No
WP1	Partners attending Research Advisory Board	3,9, 15,21, 27,33	3 WP1 Partners 6 times during project	18
WP1	Partners attending Expert Fora	6,10, 10, 30	3 WP1 Partners 6 times during project	12
WP4	Metadata and Content Ingestion Clinics	6,12, 18,24	All content partners will attend two clinics	30
WP4	Metadata Working Group	5,17,29	3 partners from project, (plus 3 externals)	9
WP 2 , 5	Meetings with Europeana Network on defining and advocating Europeana Cloud	3-36	WP2 and WP5 partners	34
WP5 / 7	Project Kick-off meeting; mid-term project meeting; Europeana Cloud Conference	3, 18, 36	All partners	105
WP6	Europeana Research Coordinators Group	6, 18, 24	WP6.2 Members	12
WP6	Dissemination	1-36	All partners	35
WP7	Review Meetings	12, 24, 36	Executive Board	24

## Events and Other Costs:

Europeana Foundation requests the following funds:

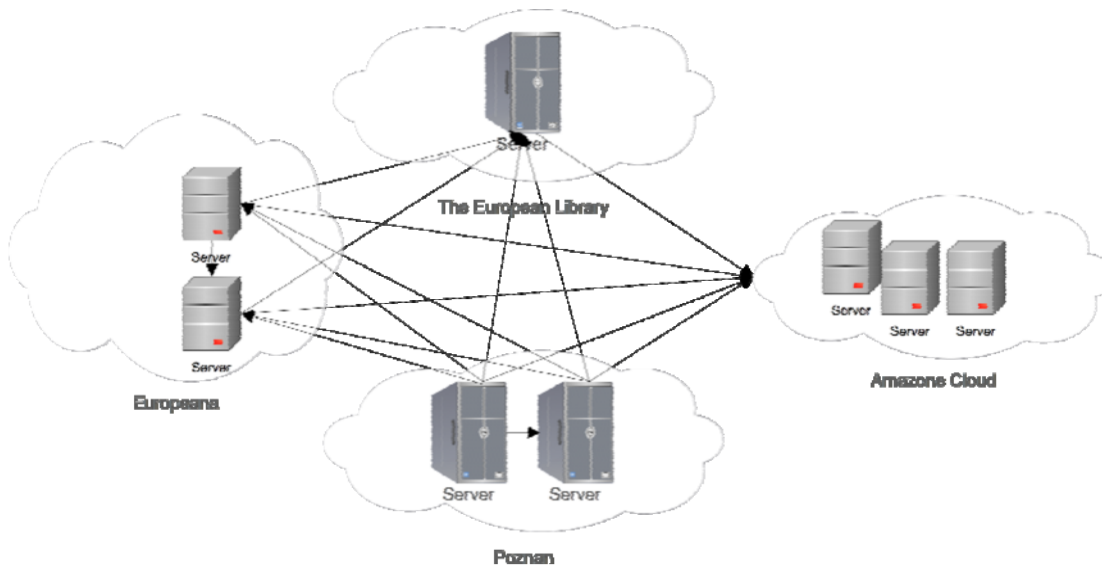
- 60K for the advocacy work related to the creation of case studies, white papers, and other associated research work related to the advocacy of Europeana Cloud.
- 30k for events and conferences in WP6 and the 6 to 8 workshops in WP5.2. It is expected that more than this will be needed for the three general assemblies for the project, but meetings will be dovetailed with other events organised by Europeana
- 27k for working groups (Europeana Cloud Task Force – 6 meetings , Cloud Coordination Group - 6 meetings , Metadata Working Group – 6 meetings ) involving members who are not part of the project

- Europeana also requests 55k for hardware costs as detailed below

Trinity College Dublin, The University of Gothenburg and The Digital Curation Unit all request 7.5k for the inviting externals to attend the Research Fora. KNAW-DANs also request 7.5k for one Expert Forum and a further 10k for inviting external members to attend the Research Advisory Board

### Hardware Costs

To facilitate the construction of Europeana Cloud, the Europeana Foundation requests 55k for a managed hosting service and a new server. The Poznan Supercomputing Centre requests two servers (20k) as a part of the cloud environment which will be utilized during the project.



Europeana Cloud is intended to be a distributed, heterogenous cloud. Differently from other cloud infrastructures (where all servers exist in one place), Europeana Cloud will build an infrastructure which makes use of servers at different partners within the project, plus one commercial provider

To evaluate all potential hardware setups the following 4 scenarios must be analysed so to judge the different performances of Europeana Cloud in different settings. This requires

1. Multiple physical servers at one site (Poznan)
2. One physical Server with large storage at one site (The European Library)
3. Virtual servers at one site (Europeana)
4. Amazon / Google Cloud

As part of the European Foundation, The European Library (will extend its current operational server infrastructure with a dedicated project server with large storage capacity. With full costs for 3 years depreciation, the server will cost 20k and 5k / year to hosting costs, meaning an overall cost of **35k**.

Furthermore the Europeana Foundation will hire in a number of nodes from different cloud providers, such as Amazon S3

Cloud Server Costs:  $10\text{cent}/\text{hour} * 24 * 365 * 3 = 876 \text{ EUR}/\text{Node}/3\text{year} * 10 \text{ nodes} = \text{approximately } \mathbf{8760\text{EUR}}$

Storage Cloud e Costs:  $0.12 \text{ cent}/\text{GB}/\text{month} = 4.32/\text{GB}/3\text{year} * 2000 = \text{approximately } \mathbf{8640 \text{ EUR}}$  for 2TB of data

Poznan Supecomputing Centre, being the only organization where no additional hosting costs are charged will further provide evidence for scenario a) and needs therefore reserve at least two servers (**20k** for two servers 3 year depreciation = full costs) for the whole period of the project.

Total Costs:

Europeana Foundation = 35k + 9k + 9k = 53k

Poznan = 2 \* 10k = 20k

### Partner Monthly Costs:

Partner	Monthly Rate
Europeana Foundation	€ 6,210
Ariadne Foundation	€ 6,000
Digital Curation Unit	€ 4,500
Bavarian Library Consortium	€ 6,300
Central and Eastern European Online Library	€ 5,000
CERL	€ 6,500
ISTI- CNR	€ 6,000
Debrecan	€ 2,000
DIALNET	€ 4,200
Academy of Sciences & Arts	€ 7,143
Copenhagen University Library	€ 7,000
Kennisland	€ 7,100
KNAW (DANS & NIOD)	€ 6,000
KUK - Leuven	€ 6,250
LIBER	€ 6,000
Cinecitta Luce	€ 5,000
MDR	€ 9,000
The National Archives of Finland	€ 5,100
National Library of Wales	€ 7,399
National Tech Library	€ 1,876
OAPEN	€ 6,772
Open Knowledge Foundation	€ 6,800
Open University	€ 5,533
Poznan Super Computing	€ 4,700
Trinity College	€ 7,836
University of Tilburg	€ 7,500
UCL	€ 9,621
Edinburgh University	€ 6,937
University of Gothenburg	€ 7,424
U Bruxelles	€ 10,255
U Bielefeld (BASE)	€ 5,000
Patras	€ 2,000
VU Amsterdam	€ 5,588

### B3.6 Dissemination / Use of Results

Please provide a list of intended meetings with nature (Kick-off, conferences, dissemination events, evaluation etc.), participants and prospective locations.

#### List of Events & Meetings

Meeting	Date	Participants
Project Kick Off	M1-3	All Project Partners
Europeana Cloud Task Force	M3-20 (as	Appointed Memebtrs of Task Force
Cloud Co-ordiantion Meetings	M1-36 (as	Relevant stakeholders of EU funded
Expert Forum 1	M6	WP1, Research Communities
Expert Forum 2,3	M10	WP1, Research Communities
First Review	M12	Executive Board
Expert Forum 4	M30	WP1, Research Communities
Mid term Project Meeting	M17-19	All Project Partners
Second Review	M24	Executive Board
Final Project Meeting/ Europeana Cloud	M34-6	All Project Partners
Final Review	M36	Executive Board

These are the principal meetings. There will also be smaller meetings (a mixture of virtual and physical meetings)

- Metadata and content ingestion clinics
- Executive Board to steer the project (monthly)
- Research Advisory Board to provide oversight of the direction of WP1, and offer guidance to the strategic relationship between the research community and Europeana (once or twice a year)
- Europeana Cloud Task Force (twice a year)
- Cloud Co-ordination Group (twice a year)
- Research Co-ordinators Group for funders and builders of research infrastructures (once or twice a year)
- Metadata Working Group (twice a year)