



DELIVERABLE

Project Acronym: Europeana Cloud
Grant Agreement number: 325091
Project Title: Europeana Cloud:
Unlocking Europe's Research via The Cloud

D5.4 Governance Structure for Europeana Cloud

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Project co-funded by the European Commission within the ICT Policy Support Programme		
Dissemination Level		
P	Public	√

Revision History

Revision	Date	Author	Organisation	Description
v.01	25Nov 2015	Els Jacobs	Els Jacobs Advies	Draft
v.02	30Nov2015	Victor-Jan Vos Jill Cousins	Europeana Foundation	Review
v.03	7Dec2015	Els Jacobs	Els Jacobs Advies	Final version

Statement of originality:

This deliverable contains original unpublished work except where clearly indicated otherwise.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



D5.4 Governance Structure for Europeana Cloud

Executive Summary

After consulting the Consortium Partners during the Europeana Cloud Plenary in Edinburgh in June 2015 and based upon internal discussions, the Europeana Cloud Consortium Governance Task Force recommends creating a new legal entity to manage the future Europeana Cloud Services based on the following design principles:

The business organisation operating the Europeana Cloud infrastructure and services should be an (1) independent (2) non-profit legal entity, which is (3) financially self-sustainable and (4) supports the cultural heritage sector across Europe (5) in collaboration with the Europeana Foundation. Moreover, the business organisation should be (6) legally and financially owned by a limited number of partners, operating in the field of aggregating and providing cultural heritage data and (7) involving customers and other stakeholders. In addition, the (8) the technical ownership should be decided wisely. The governance structure of the Europeana Cloud infrastructure should be (9) transparent and (10) fit for purpose.

The Cloud Consortium Governance Task Force agreed that this new business organisation should have a Cooperative legal structure and governance model, since its analysis showed that the Cooperative model will best match the agreed design principles.

The Cooperative model also corresponds to the values of the Cultural Commons which were consolidated under the Europeana v3.0 project. Commons principles like trust, mutuality and engagement guide Europeana as a movement, association and network.

The recommendations for the governance model observe the legal form of a Cooperative and will be further elaborated and validated with the partners of all the networks contributing to and with the potential to contribute to the Europeana Cloud Services. The model will be implemented as soon as the founding Europeana Cloud Consortium Partners have more partners on board. The Cloud Consortium Governance Task Force agreed that the model should grow and may change over time.

To keep overheads and bureaucracy low, the Europeana Cloud Executive Board agreed with the end of the Europeana Cloud project and until the new legal entity is created, for the founding Europeana Cloud Consortium Partners, Poznań Supercomputing and Networking Center (PSNC) and Europeana Foundation (EF), to manage the Europeana Cloud Services based upon a mutual contractual agreement.

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Recommendations for the Europeana Cloud Governance Model

“Co-operatives are a reminder to the international community that it is possible to pursue both economic viability and social responsibility.” – *Ban Ki-moon, UN Secretary General*

During the Europeana Cloud Plenary in Edinburgh in June 2015 the Europeana Cloud Consortium Partners discussed the design principles for a viable long-term governance structure and model for the Europeana Cloud infrastructure and services. In small groups, the Partners listed positive and negative considerations of seven suggested design principles. They were requested to add principles and to rate them (see Appendices 1 and 2).

All Consortium Partners were invited to join a Governance Task Force, to develop and validate a set of recommendations for the governance of the Europeana Cloud infrastructure and services. The three main aggregating partners in the Europeana Cloud project, The European Library (TEL), the Europeana Foundation (EF) and the Poznań Supercomputing and Networking Center (PSNC), participated in the Task Force as well as six other Consortium Partners. Moreover, a representative of the LoCloud project joined the Task Force to explore future collaboration (see Appendix 3).

In a couple of (virtual) meetings, the Cloud Consortium Governance Task Force assessed the outcomes of the debates of the Europeana Cloud Plenary in Edinburgh and validated a set of design principles in July 2015. The Task Force recommended that the business organisation operating the Europeana Cloud infrastructure and services to be an (1) independent (2) non-profit legal entity, which is (3) financially self-sustainable and (4) supports the cultural heritage sector across Europe (5) in collaboration with the Europeana Foundation. Moreover, the business organisation should be (6) legally and financially owned by a limited number of partners, operating in the field of aggregating and providing cultural heritage data and (7) involving customers and other stakeholders. In addition, the (8) the technical ownership should be decided wisely. The governance structure of the Europeana Cloud infrastructure should be (9) transparent and (10) fit for purpose (see Appendix 4).

The Task Force would rather advocate a large number of cultural heritage institutions owning the new entity. Yet, the Task Force assumed that only a few cultural heritage institutions are able to take up the legal and financial responsibility of ownership due to (national) legal regulations.

In September 2015 the Cloud Consortium Governance Task Force checked four potential legal structures against the design principles (Appendix 5).

design principles	governance structure			
	ASSOCIATION <i>Vereniging</i>	FOUNDATION <i>Stichting</i>	CO-OPERATIVE <i>Coöperatie</i>	PRIVATE LIMITED COMPANY <i>BV</i>
(1) an independent legal entity	+	+	+	+
(2) a non-profit legal entity	+	+	+	-
(3) financially self-sustainable	-	-	+	+
(4) supporting the cultural heritage sector across Europe	+	+	+	-
(5) in collaboration with the Europeana Foundation	+/-	+/-	+/-	-
(6) owned by a limited number of partners (legally and financially), operating in the field of aggregating and providing cultural heritage data	-	+	+	+
(7) involving customers and other stakeholders	+	+	+	-
(8) technical ownership to be decided wisely	o	o	o	o
(9) transparent	+	+	+	+
(10) fit for purpose and as simple as possible	+	+	+	+

(+) conforming to the design principle
 (-) not complying with the design principle

(+/-) meeting the principle will be a challenge
 (o) solid advise; not a design principle

The Task Force concluded that the legal structure of a Cooperative matches the agreed design principles best, because Cooperatives are in a much better position than Associations and Foundations to maintain a financially self-sustainable business. Cooperatives may generate profits and may conclude the same kind of agreements with non-members as they conclude with members. Consequently, the number of paying customers can be much larger than the number of members of the corporation.

At the same time, Cooperatives can qualify as not-for-profit organizations, since by law they must conduct their business for the sole benefit of their members. Cooperatives work with equity provided by its members (in proportion to their use of the Cooperative services). Cooperatives often emerge when important services are not available or important community needs are not met. Therefore, it is the needs of a community that are paramount, with profit generation being a second concern.

The Cooperative model secures best the close and direct link with the cultural heritage sector across Europe, since both individual institutions and entities representing cultural heritage institutions (such as aggregators) can become members. Ownership by the cultural heritage sector is important, because the Europeana Cloud Services must be readily recognised as a service led by the cultural heritage sector for the benefit of the cultural heritage sector.

Moreover, the Cooperative model corresponds to the values of the Cultural Commons which were consolidated under the Europeana v3.0 project. Commons principles like trust, mutuality and engagement guide Europeana as a movement, association and network.

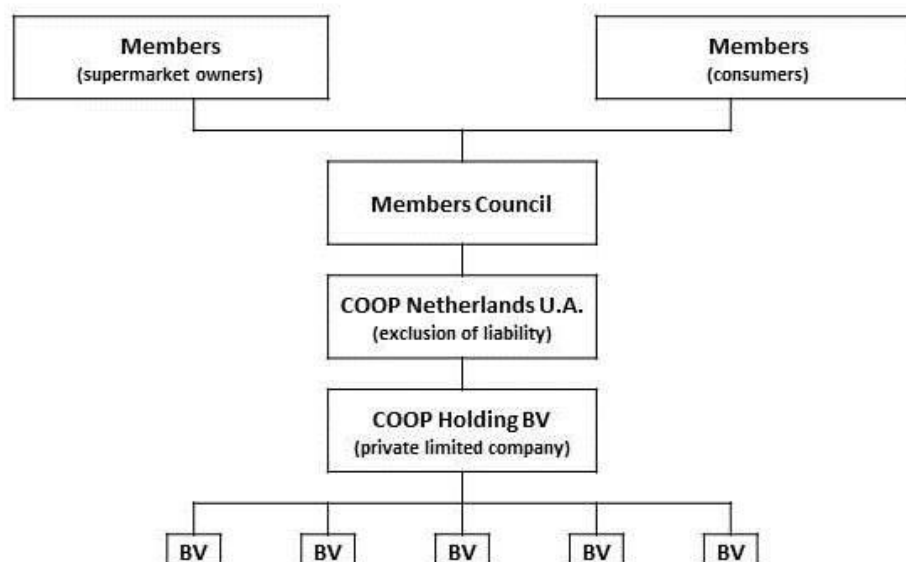
Cloud Consortium Governance Task Force Final Recommendations

1. A Cooperative be set up for the financial and legal management of the new entity.
2. The Cooperative should be legally separate from The European Library (TEL), the Europeana Foundation (EF) and the Poznań Supercomputing and Networking Center (PSNC), the three main aggregating partners in the current Europeana Cloud project.
3. PSNC and the Europeana Foundation are to be the founding members, with a consequent larger role in governance. Particular consideration should be given to the position of the Europeana Foundation, representing over 3,000 cultural heritage institutions across Europe, and its role must be well defined. Since TEL has not (yet) become an independent legal entity as anticipated, it cannot commit to being a founding member as well.
4. Before actually setting up the new legal entity, other organisations operating in the field of aggregating and providing cultural heritage data (national and domain aggregators in particular) who are ready to do so can be invited to join as founding members.
5. The final governance model will be dependent on the founding partners and first members of the Cooperative.
6. The governance model for the new Cooperative should align with the legal construct and be able to assure the delivery of strategy.
7. The governance model should be flexible and able to respond to market change but should relate to the values of the Europeana ecosystem.
8. The mission of the new Cooperative should support the vision of Europeana, both Foundation and Network, to transform the world with culture, building on Europe's rich heritage to make it easier for people to use, whether for work, for learning or just for fun. The Cooperative should contribute to bringing together the organisations that have heritage to share with the people and sectors who want to view, share and build with that heritage.

Setting up the Proposed Cooperative

The Cloud Consortium Governance Task Force assumed that the number of members joining the Cooperative will be limited, because few cultural heritage institutions may be willing or able to take up the legal and financial responsibility of ownership. If membership will be open to national or domain aggregators only, the number of potential partners is small by nature. In addition, the role of aggregators is expected to change in the coming years, not least because the Europeana Cloud infrastructure and services will provide tools to ease the mode of processing data. To increase the number of potential partners, membership should be open to organisations more generally operating in the field of aggregating and providing cultural heritage data.

Yet, the Task Force felt that the liability of the members for a deficit ought be restricted as not to create an impregnable obstacle for cultural heritage organisations to join the Cooperative. The Task Force members appreciated the structure of the COOP supermarkets in the Netherlands as an helpful example how to address this delicate issue.



Under Dutch law, a cooperative society may include in its articles the exclusion of any liability of its members and former members. The cooperative must publicly display the limited liability of its members by adding the letters U.A. = *Uitsluiting van Aansprakelijkheid* (exclusion of liability) to its company name. In the case of the COOP Netherlands U.A., the cooperative exists for the sole purpose of providing capital to a second (private limited) company COOP Holding BV, which actually operates the COOP supermarkets and some other private limited companies supporting the supermarkets.

The Task Force approved the notion that the business organisation managing the Europeana Cloud Services could have a similar indirect structure. The model of a cooperative owning a private limited company would resolve several critical issues. The cooperative structure allows for a large number of cultural heritage institutions joining and owning the services. The exclusion of liability limits their financial risks. In case of mishap, the members of the cooperative U.A. (organisations operating in the field of aggregating and providing cultural heritage data) may lose their invested capital, but not more than that amount. The governing body of the cooperative U.A. would exercise the shareholders' power of the private limited company deciding on the strategic direction of the business – which by principle must 'support the cultural heritage sector across Europe'.

The indirect structure may also settle concerns concerning the relationship of the new legal entity with the Europeana Foundation as well as with any other organisation operating in the field of aggregating and providing cultural heritage data, who have their own private activities which should clash nor overlap with the Europeana Cloud Services. For example, advocacy work of the Europeana Foundation would not interfere with the delivery of the services. Development work of PSNC would be separate from the development of new services by the private limited company managing the Europeana Cloud Services. As founding members, both the Europeana Foundation

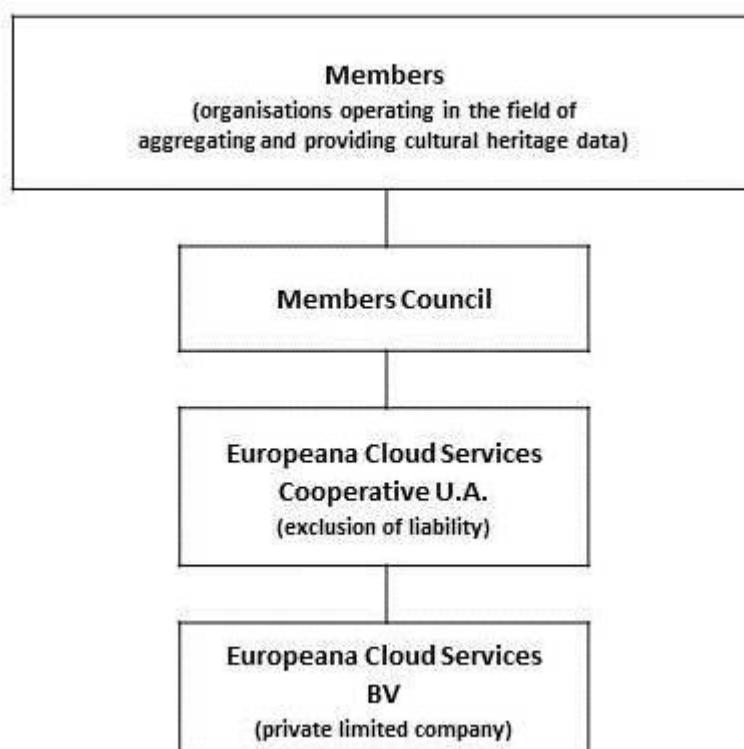
and PSNC have a strong say in the governing body of the cooperative U.A. which decides on the strategic direction of the company operating the services.

In addition, the COOP Netherlands structure shows that it is possible to have different categories of members in a cooperative. In the case of the Europeana Cloud Services one could imagine differentiating membership terms for big aggregators and for small data providers.

The construction of a cooperative U.A., which owns a private limited company managing the Europeana Cloud Services, does not contribute to a transparent governance structure. However, the indirect management system can be 'fit for purpose' and 'the simplest possible' solution. The structure is commonly used in commercial businesses.

Governance Model

Given the Cloud Consortium Governance Task Force recommendations for a legal structure of a Cooperative and the need to align its Governance Model, which should support the strategic goals of the business as set out in its Business Plan (D5.6). The following governance model is proposed.



Under Dutch law, the Europeana Cloud Services Cooperative will be a 'Cooperatie U.A.', excluding the liability of its members and former members for a deficit. The objective of the *Europeana Cloud Services Cooperative U.A.* is to provide capital to the private limited company *Europeana Cloud Services BV*, which actually operates the Europeana Cloud infrastructure and services.

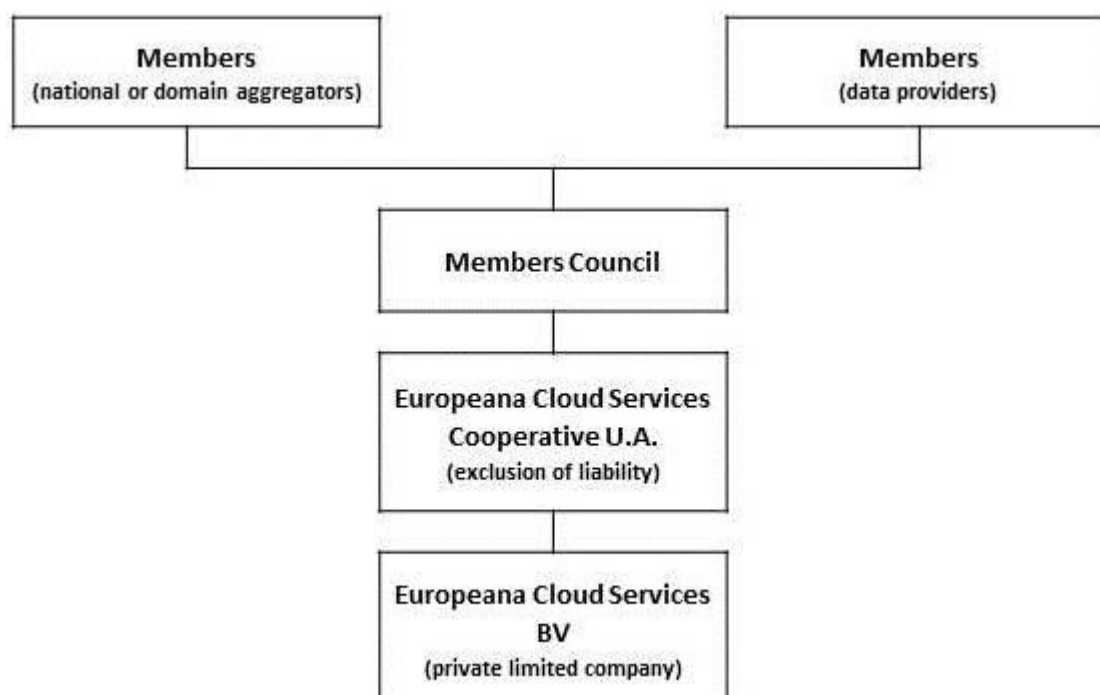
The governing body of the *Europeana Cloud Services Cooperative U.A.* exercises the shareholders' power of the *Europeana Cloud Services BV* deciding on the strategic direction of the business.

The objective of the *Europeana Cloud Services BV* is to support the cultural heritage sector across Europe through maintaining and (further) developing a cloud infrastructure and a suite of services for the storage and sharing of cultural heritage metadata and content. The *Europeana Cloud Services BV* will employ the required staff to manage the service, such as providing for storage facility, operating and utilizing a suite of services, selling these services to customers, and adding new services, through either internal or external development.

The private limited company *Europeana Cloud Services BV* delivers services to the Members of the Cooperative U.A. These services are delivered and/or administered on credit. As a sustainable advance payment for these services, each Member must deposit funds in a credit savings account kept by the *Europeana Cloud Service Cooperative U.A.* The articles of cooperation will state which body within the Cooperative U.A. has the authority of deciding on the deposit amounts and how they will be collected.

Membership of the *Europeana Cloud Services Cooperative U.A.* is limited to organisations operating in the field of aggregating and providing cultural heritage data, both individual cultural institutions and entities representing cultural heritage institutions, such as domain and national aggregators.

Members can be divided in categories to be able to differentiate membership terms for big aggregators and small data providers, resulting in two different tracks of nominating the Members Council of the Cooperative U.A.



The nomination procedure for the Members Council observes the democratic system of 'one member, one vote', safeguarding that Members are all equal decision-makers in the enterprise. A nomination procedure may not be necessary if or as long as the number of Members of the Cooperative U.A. is limited. In this situation, all Members will participate in the Members Council. The rules of the Cooperative U.A. will state how the Council makes decisions, either following the 'one member, one vote' system as well or applying a system of weighted voting to provide for a larger role in governance for the Founding Members or any other group of Members.

The Members Council is the highest governing body of the Cooperative U.A. It determines the membership terms, deciding whether or not Members must provide stake-money and/or periodic contributions. The Council appoints the Executive Board of the Cooperative U.A. following a binding nomination by the Board.

The Executive Board of the Cooperative U.A. will have the limited number of five to seven members. Founding Members of the Cooperative may claim a permanent seat in the Board. However, their anticipated larger role in the governance of the Cooperative U.A. may be ensured differently, depending on their actual number.

The Executive Board will be composed of both Members of the Cooperative U.A. and outside experts. After all, the Board will need qualified financial expertise since the main objective of the Cooperative U.A. is to manage the shareholders capital of the *Europeana Cloud Services BV* and the deposit funds of the Cooperative U.A.'s Members. The type and required level of financial competencies may not be commonly available among the Members, who are all cultural heritage organisations. The rules of the Cooperative U.A. will state the powers and responsibilities of the Executive Board and how it makes decisions.

The Executive Board appoints the senior managers who are in charge of the daily management of the Cooperative U.A., acting under supervision and authority of the Board. The mandate of the senior managers will be captured in formal management regulations.

Also, the Executive Board exercises the shareholders' power of the private limited company *Europeana Cloud Services BV*, on behalf of the Cooperative U.A. In this role the Executive Board may decide to nominate a supervisory board, who has the authority to appoint the *Europeana Cloud Services BV* executive directors and to exercise on behalf of the shareholders all other powers common to supervisory boards. Alternatively, the Executive Board itself could act as the supervisory board. The selected structure will depend on which model the Members of the Cooperative U.A. would consider to be most transparent, fit for purpose and as simple as possible - according the Cloud Consortium Governance Task Force recommendations.

To assess the most viable governance model, potential members of the Cooperative U.A. will be asked about their preferences. The governance structure of the new legal entity will be elaborated with the partners of all the networks contributing to and with the potential to contribute to the Europeana Cloud Services. They will validate the governing document of the Cooperative U.A. stating in detail the objectives of the organisation and how they will be achieved. They will define the explicit terms of membership. The network partners must advise on the liability of the

members, for a deficit in particular. The governing document will state how the Members of the Cooperative U.A. nominate the Members Council, how the Council meets and makes decisions. The potential members need to agree on how the Executive Board of the Cooperative U.A. is appointed, composed and with which precise powers the Board will be vested. The governing document will specify what happens to any surplus and what happens to assets when the Cooperative U.A. is sold, taken over or broken up.

Drafting the governing document will start as soon as the partners are identified which have the highest potential of joining the Europeana Cloud Services as a member.

After the end of the Europeana Cloud project and until the new legal entity is created, the founding Cloud Consortium Partners, Poznań Supercomputing and Networking Center (PSNC) and Europeana Foundation (EF), will manage the Europeana Cloud Services based upon a mutual contractual agreement.

Appendix 1



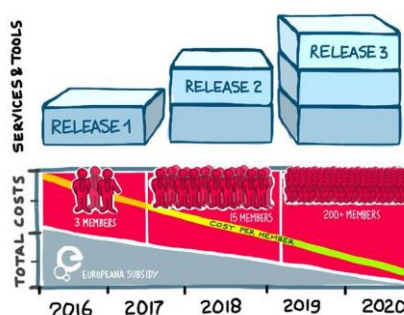
At the end of the Europeana Cloud Project

- Cloud infrastructure
 - for storage and sharing
 - cultural heritage metadata and content
 - people who run the service
- Europeana – TEL – PSCN Poznan – some other customers

Expected development next five years

- 2016 - basic product + few customers + public DSI funding
- more services
 - more customers
 - less public funding
- 2020 – better product at lower costs for all customers

Expected development next five years



Governance + business structure – several options

Limited Liability Company	Cooperative Corporation
• owned by shareholders	• owned by members
• shareholders can be any private investor	• membership limited to aggregators / data providers
• profits to shareholders	• profits to members
• risk limited to owners	• members risk their investment (fee) and their services
• customers pay for service	• members decide on product suiting their needs
• management / shareholders decide on profitable product	

Discussing the governance model - design principles

- Black and yellow hats in 3 break outs
- do you agree ?
 - positives / negatives of each principle
 - other principles to add ?
- Governance Task Force to draft recommendations

Cloud governance model - design principles

1. transparant structure
2. simple structure
3. financially self-sustainable
4. aggregators own the service – financially
5. aggregators own the service – legally
6. independent legal entity
7. mutually beneficial relationship with Europeana Foundation

Thanks for listening!



Let's start the debate



Appendix 2



Edinburgh Rating	
Financially self-sustainable	35
Transparency	26
Independent legal entity	16
Simple	15
Mutually beneficial relationship with Europeana	11
Aggregators own the service legally	10
Non-profit	10
Aggregators own the service financially	8
Added value beyond mere hosting	5
Open + inclusive	1



Appendix 3

Cloud Governance Task Force / June-November 2015

Leader - Julia Fallon (EF / Europeana Foundation)

Coordinator - Els Jacobs (EJA / Els Jacobs Advies & Onderzoek)

Purpose

To develop and validate a set of recommendations for a viable long-term governance model and structure for the Europeana cloud infrastructure and services.

Name of participants - a smaller group of 5 to 8 Cloud Consortium members

Eelco Ferwerda (OAPEN Foundation)
 Kate Fernie (LoCloud)
 Marcin Werla (PSNC / Poznań Supercomputing and Networking Center)
 Marco Rendina (LUCE / Istituto Luce Cinecittà)
 Marian Lefferts (CERL / Consortium of European Research Libraries)
 Nienke van Schaverbeke (TEL / The European Library)
 Panos Georgiou (UPAT / University of Patras)
 Sašo Zagoranski (SEM / Semantika)

Timeframe - 4 virtual (Skype) meetings between 11 June – 30 November 2015

1. Mid July – assessing outcomes Edinburgh Plenary discussions; agreement on design principles; and their pro and cons based on long-term goals of the service (out of current Business Model).
2. Early September – discussing different types of structures against design principles; one particular model more suitable than others (based upon background paper listing possible structures) ?
3. Mid October – review of draft recommendations.
4. Early November – validating recommendations.

Budget - none (virtual meetings only)

Outcome - Cloud deliverable 5.4 Recommendations on governance model and structure

Appendix 4

Cloud Governance Design Principles Validated

Assessing the outcomes of the debates during the Cloud Plenary in Edinburgh and the subsequent Task Force discussions, the design principles may be arranged in three main clusters.

- A. The financial self-sustainability, legal independency and the relationship with the Europeana Foundation are closely related and raise similar concerns. The principle of non-profitability should be discussed here also.
- B. The legal, financial and technical ownership of the service are three of a kind and difficult to discuss separately.
- C. Transparency, clearness, openness and inclusiveness may be taken together as well.

Important general considerations

A solid technical structure is an absolute prerequisite for a successful and sustainable cloud infrastructure which will steadily buy-in more and more partners over time.

The Recommendations for a governance model must include an explicit description of the kind of services the 'Europeana Cloud' infrastructure will provide (at which moment in time).

The cloud infrastructure must demonstrate added value beyond mere hosting to motivate partners to join and use the service. The Business Model currently lists the following benefits:

- Metadata and content management will be more reliable;
- Data management will require less technical expertise;
- The process of metadata mapping will be swifter and easier;
- Great possibilities (tools) for metadata enrichment;
- Storage space for metadata and content.
- Saving time and costs;
- Allowing for greater re-use (in research, education, tourism and creative industries) following the create-once-publish-everywhere principle.

The cloud infrastructure needs a governance model which will grow over time. At the start, it must suit the three founding partners, The European Library¹, the Europeana Foundation and Poznań Supercomputing and Networking Center. Later the structure must accommodate a larger number of partners.

The Recommendations must include a clear timeline how the governance model will be rolled out. It is important to identify the elements which determine the development of the governance model: the operational side of the service, a certain number of partners and/or maturity of the service ?

The governance structure (and cost model) may impact the technical infrastructure and operational side of the service. Therefore the Task Force must have qualified technical knowledge on board.

¹ Currently the CENL Executive decides on policy and strategy of The European Library, not the Europeana Foundation. Therefore, TEL and Europeana must be considered separate partners.

It is important to note that getting in and out the service is currently a complex technical process! Such an operation will evolve into a smoother process over time once more services will become available as part of the cloud infrastructure.

CLUSTER A

The business organisation operating the 'Europeana Cloud' infrastructure must be an

- (1) **independent**
- (2) **non-profit** legal entity, which is
- (3) **financially self-sustainable** and
- (4) **supports the cultural heritage sector across Europe**
- (5) **in collaboration with the Europeana Foundation.**

- (1) **independent** legal entity

The legal entity running a specialist cloud infrastructural service must be more flexible and functional than the Europeana Foundation can be. Ensuring the service meets the required standards makes heavy demands on an organisation and calls for a typical aptitude and dispositions. The organisation will need the following layers:

- A. A technical infrastructure and a place where it will be located, connected to power, internet etc;
- B. Technical people who operate the cloud and all services according to the required standards (administrators/operations specialists – initially 1-2 FTE);
- C. Technical people who maintain and develop the cloud services code (programmers/architects – initially 3-5 FTE);
- D. CTO / technical team leader responsible for ensuring all technical work is done up standard (1 FTE);
- E. Other staff members responsible for managing the relationship with partners and customers, finance, PR/marketing (3-4 FTE ?);
- F. (External) accountant, lawyer ...

The location of layer (A) must be chosen wisely. It must be a professional company. Costs must be affordable and easy to predict (currently estimated at € 5,000 to 10,000 per month). Some providers will offer both renting sort of a private cloud infrastructure and hosting hardware owned by the Europeana cloud infrastructure. It should also offer good infrastructure level monitoring. Changing providers will take weeks, if not months.

One could consider hiring some public cloud (like Amazon, Google, IBM, Oracle) in the beginning, but using the public cloud may not be cost-effective in the longer run.²

² Relevant sources for further developing the business model: *Why Some Start-ups Say the Cloud Is a Waste of Money* <http://www.wired.com/2013/08/memsql-and-amazon/> ; *Red Hat CEO: Public cloud 'obscenely expensive at scale'* <http://www.techrepublic.com/article/red-hat-ceo-public-cloud-obscenely-expensive-at-scale/> ; *Is there a point where a*

From the technical perspective, layers (B) and (C) – and maybe also layer (D) – should better be connected to a larger legal entity specializing in IT services AND focussing on the cultural heritage sector (personal costs calculated at € 4,000 per PM on average).

If these layers will be part of a small separate ‘Europeana Cloud’ legal entity, the organisation will possibly suffer from a high employee turnover, since it will not be able to compete with commercial companies. Also, a small organisation will not be able to fill vacancies quickly. Within a larger organisation staff members can be shifted to take on tasks and fill vacancies (temporarily). The opportunity of horizontal transfers may keep staff and their knowledge within the organisation.

Layers (E) and (F) could be the core of the (very small) independent legal entity liaising the partners and customers with the technical layers (A) to (D).

(2) non-profit

Profits and revenues raised by and for the service will be invested in the cloud service.

A non-profit corporation matches the common situation in the cultural heritage sector and helps with focussing on this sector. It underlines that the cloud service does not seek to be competitive with commercial providers, but rather provide a service that is specifically designed for the cultural heritage sector.

(3) financially self-sustainable

Since structural public (EU) funding, which will not be available in the long term, self-sustainability is a premise for success.

Until 2020 some public DSI funding will be available. It is mandatory to demonstrate in actual figures which services are covered by DSI funding. It must be clear which other elements need financing above DSI funding. This will also help identifying issues of potentially disharmonizing interests which otherwise may not come to the surface. People act differently if they have to put their hands into their pockets.

The business organisation running the ‘Europeana Cloud’ infrastructure should derive self-sustainability from its focus on the cultural heritage sector.

Its unique selling point must be delivering cloud services which are fully dedicated to and specifically designed for the cultural heritage sector. Only by tailoring its services to the needs of the cultural heritage sector, the ‘Europeana Cloud’ infrastructure will be able to compete with large commercial cloud services like Amazon or Google. The governance structure should support the business model in such a way that aggregators choose the ‘Europeana Cloud’ infrastructure over commercial companies.

Develop a range of scenarios to address the risk of the service not being self-sustainable, if it lacks structural public funding. The cloud infrastructure may be recognised as a public service

private cloud is cheaper than the public cloud? <http://www.networkworld.com/article/2825994/cloud-computing/is-there-a-point-where-a-private-cloud-is-cheaper-than-the-public-cloud.html>

such as the water supply system. Life would be much easier if a governance model would exist allowing potential partners to skip public procurement procedures.

(4) supporting the cultural heritage sector across Europe

The legal entity derives its strength from addressing the needs of the European cultural heritage sector productively. It must have mutually beneficial relationships with all aggregators. The preamble or by-laws should state that they support each other strategically.

(5) collaborating with the Europeana Foundation.

The Recommendations must provide explicit information on the relationship of the independent legal entity with the Europeana Foundation. The division of activities of the two entities must be clear – in 2016; and five years from now. It must be apparent how the long term goals of the cloud infrastructure relate to the objectives of the Europeana Foundation. It must be clear how the two entities may support each other; and whether they have potential conflicts of interest.

The Europeana brand is an incentive to use the ‘Europeana Cloud’ infrastructure. It adds value. Close collaboration with the Europeana Foundation will embed the service truly in the Europeana environment and will give it a direction. Focussing on their respective strengths, cores skills and core services, the ‘Europeana Cloud’ infrastructure and Foundation can work in alignment enhancing the service, through increased efficiency and lower costs. The independent entity may lose political support if it is not connected to Europeana.

The relationship with the ‘Europeana Cloud’ infrastructure is essential for Europeana. There is a dependency between the storage facility and its public platform, APIs and user services. Could the service slowly grow out the Europeana Foundation? How to assess risks to the Europeana Foundation and the Europeana ecosystem in case the service fails?

It will create confusion everywhere if the new legal entity is named ‘Europeana [something]’.

CLUSTER B

The business organisation operating the ‘Europeana Cloud’ infrastructure must

- (7) be legally and financially **owned by a limited number of partners, operating in the field of aggregating and providing cultural heritage data** and
- (8) **involving customers and other stakeholders.**
- (9) **Technical ownership** to be decided wisely.

(7) legal and financial ownership

Ownership by the cultural heritage sector is important, because the ‘Europeana Cloud’ infrastructure must be readily recognised as a service led by the cultural heritage sector for the benefit of the cultural heritage sector. Owners have control over the service and are able to take decisions quickly. They define the strategic direction. Ownership generates a vested interest. It may encourage investment.

Yet, the number of partners will be limited, because few cultural heritage organisations may be willing or able to take up the legal and financial responsibility of ownership due to (national) legal regulations.

If ownership will be open to aggregators only, the number of potential partners is small by nature. In addition, the role of aggregators is expected to change in the coming years, not least because the 'Europeana Cloud' infrastructure will provide tools and services to ease the process of metadata mapping. Consequently, to increase the number of potential partners, ownership should be open to organisations more generally operating in the field of aggregating and providing cultural heritage data.

These organisations will share the financial risk of hosting and other services. They are encouraged to work as a collective for the mutual benefit. They can respond quickly and adequately to changes in the ecosystem. It will ward off competition of other services.

(8) involving customers and other stakeholders.

The limited number of potential partners demands alternative means to involve customers and other stakeholders besides legal and financial ownership, if the 'Europeana Cloud' infrastructure is to capitalize on its unique selling point as a service led by the cultural heritage sector for the benefit of the cultural heritage sector.

Creating two categories of stakeholders, owners and customers, will simplify the governance model enhancing the decision making power of the organisation.³

Involvement will be limited to organisations affiliated with the cultural heritage sector.

(9) technical ownership

The location of the private cloud infrastructure must be chosen wisely as explained earlier. Some professional providers offer both renting sort of a private cloud infrastructure and hosting hardware owned by the 'Europeana Cloud' infrastructure. It should also offer good infrastructure level monitoring. Changing locations will take weeks, if not months.

One could consider hiring some public cloud in the beginning, but using the public cloud may not be cost-effective in the longer run.

It must be clear where the development of data tool and services will be done – after the end of the Europeana Cloud project.

CLUSTER C

The governance structure of the 'Europeana Cloud' infrastructure must be

(10) transparent and

(11) fit for purpose

³ For example, the Open Preservation Foundation provides two categories of membership <http://openpreservation.org/about/join/membership/>. A cooperative governance model would allow different types of involvement as well.

(10) transparency

A transparent governance structure fosters trust and democracy. Open procedures and clarity about rules, regulations and decisions are key to the public sector.

(11) fit for purpose

The governance structure must be fit for purpose and as simple as possible. A simple structure is easy and quick to understand, scalable (up and down) and time and cost effective. Simplicity reduces confusion.

It may encourage potential partners to join and potential customers to use the service.

Appendix 5

Cloud Potential Legal Structures against Design Principles

According to the design principles validated in July 2015, the business organisation managing the 'Europeana Cloud' services must be

design principles	governance structure			
	ASSOCIATION <i>Vereniging</i>	FOUNDATION <i>Stichting</i>	CO-OPERATIVE <i>Coöperatie</i>	PRIVATE LIMITED COMPANY <i>BV</i>
(1) an independent legal entity	+	+	+	+
(2) a non-profit legal entity	+	+	+	-
(3) financially self-sustainable	-	-	+	+
(4) supporting the cultural heritage sector across Europe	+	+	+	-
(5) in collaboration with the Europeana Foundation	+/-	+/-	+/-	-
(6) owned by a limited number of partners (legally and financially), operating in the field of aggregating and providing cultural heritage data	-	+	+	+
(7) involving customers and other stakeholders	+	+	+	-
(8) technical ownership to be decided wisely	o	o	o	o
(9) transparent	+	+	+	+
(10) fit for purpose and as simple as possible	+	+	+	+

(+) conforming to the design principle
 (-) not complying with the design principle

(+/-) meeting the principle will be a challenge
 (o) solid advise; not a design principle

Considerations

(1) independent legal entity

To focus the discussion, the options presented are legal entities according to Dutch law.⁴ The legal structure may be adapted to any other national law if, in the future, this appears to be more appropriate.

(2) non-profit legal entity

- a. Associations and Foundations are non-profit organisations by law. Private Limited Companies are for-profit organisations by nature.
- b. Cooperatives are associations with legal permission to generate a profit. However, they must conduct their business 'for the benefit of their members'. Members benefit in two ways. Most importantly, products and services are customized to suit their needs. Secondly, profits are distributed to members based on the amount of business they do with the Cooperative

⁴ <http://www.dutchcivillaw.com/civilcodebook022.htm>

rather than according to capital invested. In this sense, Cooperatives qualify as non-profit organisations. The articles of incorporation determine the liability of the members for a deficit. Under certain conditions, the members' liability for a deficit may be limited to a maximum or even excluded.

(3) financially self-sustainable

- a. Generally, organisations which are allowed to generate a profit are in a better position than non-profit organisations to operate a financially self-sustainable business. They have more options and more spare money to allocate funds to long term objectives, emerging developments, future needs or to counteract economic setbacks. Associations and Foundations operate under stricter rules, especially in relation to creating financial buffers.
- b. Commonly, Associations derive their capital from membership fees, even though they may borrow money as well. To realize their objective, Foundations use capital which has been brought in from an undefined source.
- c. Cooperatives work with a mix of equity (owned capital) and debt fund (borrowings). Individual members are generally expected to provide equity in proportion to their use of the Cooperative services. Cooperatives cannot access foreign equity (money owned by shareholders). They may however conclude the same kind of agreements (on providing particular services) with non-members as they conclude with their members. This provision helps to maintain a financially self-sustainable business.
- d. Private Limited Companies use capital that is divided into transferable registered shares, meaning that the shareholders are known by name (no shares to bearer). Also, a shareholder wanting to transfer his shares must by law give other shareholders the opportunity to buy them first.
- e. Associations and Foundations may maintain a for-profit enterprise. Then, the net turnover of the enterprise is mentioned in their profit and loss accounts. A Cooperative can have a 'dependent company'.

(4) supporting the cultural heritage sector across Europe

- a. To comply with this design principle, Associations and Foundations must include the objective of 'supporting the cultural heritage sector across Europe' in their articles of incorporation.
- b. A Cooperative meets this design principle only if its members are European cultural heritage organisations, either individual institutions or entities representing cultural heritage institutions (such as aggregators), since by law a Cooperative must conduct its business for the benefit of its members.
- c. The shareholders of a Private Limited Company decide whether or not the corporation will support the cultural heritage sector. No one can stop the shareholders from deciding to serve other sectors (as well), if supporting the cultural heritage sector would not create an adequate profit. Since Private Limited Companies must register their shares, the founders can decide to accept only cultural heritage institutions or entities representing cultural heritage institutions

(such as aggregators) as shareholders. Yet, no legal notice will stop these selected shareholders from changing their mind in the future and deciding to serve other markets (as well).

(5) in collaboration with the Europeana Foundation

- a. If the Europeana Foundation is one of many members of an Association managing the ‘Europeana Cloud’ services, it may not have sufficient control over the number and nature of its services to support and complement other obligations of the Foundation (e.g. advocacy, standard setting). By law, the articles of incorporation may grant particular members more than one vote, so that their priorities may carry more weight in the activities of the Association. It will be a challenge to strike the appropriate balance of power between common and privileged members. All members must feel comfortable with the split of control.
- b. The same applies, if the Europeana Foundation is one of many members of a Cooperative.
- c. If the Europeana Foundation participates in a Foundation, the Board of the Foundation managing the ‘Europeana Cloud’ services will decide on the division of its seats among the collaborating partners. The Board must strike a fair balance of power to accommodate the interests of all partners involved.
- d. If the Europeana Foundation is one of many registered shareholders of a Private Limited Company, its control over the number and nature of services provided depends on the number of shares the Foundation owns, since all rights and obligations attached to shares are equal in proportion to their nominal amount. However, by law, particular rights in respect to exercising control in the corporation maybe attached to shares of a certain type (without voting rights or without right in the profits).
- e. Alternatively, the Europeana Foundation does not participate in the business organisation managing the ‘Europeana Cloud’ services, but concludes a contractual relationship with a third party provider. The contracted party must deliver the services according the requirements of the contract with the Foundation. The Governing Board of the Europeana Foundation will be responsible for overseeing the development and maintenance of the services, approving the service contract and ensuring contractual performance meets expectations and requirements. To pay the third party provider, the Europeana Foundation must raise funds through an agreement with the users of the service. Naturally, the users demand in return some control over the nature and number of the services provided. Consequently, the Europeana Foundation must set up a structure enabling the users (and maybe other stakeholders as well) to impress the decision making process. To complete the circle, this structure could take the form of an Association or Cooperative.
- f. Instead, the third party provider can be a wholly owned subsidiary of the Europeana Foundation, in which case the Foundation must provide the capital to set up a financially self-sustainable business organisation delivering commercially viable services.

(6) owned by a limited number of partners (legally and financially), operating in the field of aggregating and providing cultural heritage data

- a. All legal structures presented (Associations, Foundations, Cooperatives and Private Limited Companies) allow for a confined ownership restricted to ‘partners operating in the field of aggregating and providing cultural heritage data’. Such a membership or ownership requirement reinforces the design principle (4) stating that the business organisation must ‘support the cultural heritage sector across Europe’.
- b. An Association with a small number of owners (members) may not succeed in raising sufficient funds (membership fees) to manage services which are financially self-sustainable. Membership fees will be high. An Association cannot generate a profit to reduce membership fees.
- c. A Cooperative with a limited number of owners (members) has a good chance of providing financially self-sustainable services, since Cooperatives may conclude the same kind of agreements with non-members as it concludes with its members. Consequently, the number of paying customers can be much larger than the number of owners (members).
- d. Foundations administer capital which has been brought in from an undefined source. Commonly, the donors entrust a limited number of Board Members to deploy the funds according to the objective of the Foundation. The benefactors can be both a large number of small contributors and a small group of major donors.
- e. In a Private Limited Company the number of owners (shareholders) can be limited, if a small group of investors has the ability to provide the capital needed to deliver services which are profitable.

(7) involving customers and other stakeholders

- a. A business organisation can only provide a sustainable service if it tailors its product to the needs of its customers. Consequently, customers must be involved – one way or the other.
- b. Associations and Cooperatives must involve their customers (members) by law. The General Meeting is conferred with all powers. The articles of incorporation may provide that particular groups of stakeholders vote at the General Meeting as well.
- c. Foundations must have their customers and stakeholders represented in the Board to ensure their involvement in the decision making process. If customers and stakeholders are not represented, the Board can easily ignore their interests, accidentally or deliberately.
- d. Private Limited Companies typically ‘involve’ their customers through market research. Other stakeholders come in view if the profitability of the service is at stake.

(8) technical ownership to be decided wisely

- a. To deliver cloud services, a corporation needs a cloud infrastructure as much as an office, which can be hired – not necessarily owned, or rather not owned. The directors of the corporation must decide wisely whether or not to rent (temporarily) and where to locate both infrastructure, office and other essential features of the business organization managing the ‘Europeana Cloud’ services.

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- b. The potential legal structures discussed in this paper relate to the organization which employs technical people operating and developing the services and other staff running the administrative and marketing side of the business. The total number of staff members will be small - which has its benefits and detriments. Small companies can be strong and adaptive as well as vulnerable. Small business units of a larger company can be strong, less vulnerable as well as less adaptive.
 - c. If the small size of the business organization managing the 'Europeana Cloud' services is a concern, design principle (1) stating that the corporation must be 'an independent legal entity' ought to be reconsidered.

(9) transparent

(10) fit for purpose and as simple as possible

All legal structures presented (Associations, Foundations, Cooperatives and Private Limited Companies) allow for a transparent and fit for purpose governance model, if members / owners so decide. Transparency and simplicity may suffer by a large number of participating parties. However, design principle (6) stipulates a 'limited number' of owners.

Conclusions

- a. The legal structure of a **Cooperative matches the design principles best**, because Cooperatives are in a much better position than Associations and Foundations to **maintain a financially self-sustainable business**. Cooperatives may generate profits and may conclude the same kind of agreements with non-members as they conclude with members. Consequently, the number of paying customers can be much larger than the number of members of the corporation. At the same time, Cooperatives can **qualify as not-for-profit organizations**, since by law they must conduct their business for the sole benefit of their members. A Cooperative works with equity provided by its members (in proportion to their use of the Cooperative services). Associations derive their capital from membership fees, which will be high in the case of limited ownership (membership). Foundations use capital from an undefined source. Which source? Structural public (EU) funding will not be available in the long term.
- b. To develop the governance model further, the **relationship** of the future independent legal entity managing the 'Europeana Cloud' services **with the Europeana Foundation must be clarified**. The activities of the Foundation must support the corporation delivering the cloud services. The cloud services must complement the activities of the Foundation. Their businesses should clash nor overlap. The prospect of the Europeana Foundation overruling other members of the independent legal entity due to its large share in the Cooperative's equity resulting from its large use of the Cooperative services needs consideration. The financial risk of owning or contracting a provider should be assessed as well.
- c. If the small size of the business organization managing the 'Europeana Cloud' services is a concern, the principle of the corporation being 'an independent legal entity' must be reconsidered.