DELIVERABLE

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Sustainability Plan

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Authors:

     Raffaella Santucci (Uniroma1)
     Silvia Orlandi (Uniroma1)
     Antonella Ferraro (Uniroma1)
     Giovanni Ragone (Uniroma1)
     Luca M.C. Giberti (QED Film & Stage Productions Ltd.)
     Claudio Prandoni (Promoter)
     Antonella Fresa (Promoter)

Contributors:

     Giuseppe Amato (CNR-ISTI)
     Pietro Liuzzo (UHEI)
     Francesco Mambrini (DAI)
     Valentina Vassallo (CYI)
     Sorin Hermon (CYI)
     Antonio Felle (UNIBA)
     Silvio Panciera (Uniroma1)

Reviewers:

     Franco Zoppi (CNR-ISTI)

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EXECUTIVE SUMMARY

Over the course of the EAGLE project, the growing importance of developing a sustainability strategy came to surface. It was recommended at the review meeting in May 2015 that the project focus even more on this aspect in order to develop a business and sustainability model.

This deliverable describes the basis of the EAGLE Business model, including a market and business assessment/analysis, market segmentations, a draft of the business plan, and the structure of the exploitation plan.

More specifically, this deliverable reports:

- A general introduction touching upon various topics of reflection during the project's "sustainability discussions";
- An overview of the EAGLE Best Practice Network and its value;
- A description of the EAGLE products and services;
- A market analysis, including a SWOT matrix;
- A business model for EAGLE;
- An overall description of IDEA, The International Digital Epigraphy founded by the EAGLE core partners to assure EAGLE's continuity after the end of the funding period.

The present document takes into account the Business Model produced by the Europeana Photography[1] project with the consultancy of the Culture Label[2] agency. It also accounts for the sustainability plan produced by the ECLAP[3] EC project under the supervision of Dr. Catherine Delevoye from the Luxembourg-based organisation Technoport[4]

Finally, the Business Model Implementation takes into account the position of the individual partners as to their intentions and commitments.

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[1] http://www.europeana-photography.eu/

[2] Culture Label is a partner of Europeana Space. Europeana Space is a sister project about the creative re-use of digital cultural content.

[3] http://www.eclap.eu/

[4] http://www.technoport.lu/online/www/function/homepage/ENG/index.html

1   INTRODUCTION

EAGLE, the Europeana network of Ancient Greek and Latin Epigraphy, supports a network of epigraphic institutions in extending their collections to the digital domain. EAGLE is comprised by several different entities most of them non-profit – such as memory organisations, universities and research centres.

Its main focus is on users coming from the educational and research domain and those interested in cultural heritage. These three groups (cultural heritage professionals, researchers, educators and students, leisure and tourism) are the core target audiences of the project – and the basis for its subsistence.

The scaffolding has been done: a portal with a wide variety of content is online and presents a wide variety of epigraphy related materials to the online community. The materials is accessible through Europeana and through the EAGLE portal.

As the commitment to have returns on investment on the project activities is quite straightforward for industrial partners, non-profit organisations in the Consortium are also willing to contribute to the sustainability of project results, participating to the common initiatives of the Consortium.

EAGLE is not the first, nor will it be the last of platforms to reach a critical point in its build-up process. Online developments have assured that both businesses and non-profits continuously have to rethink their core values and ways of engaging their users/ customers.

Business Models are not static elements, they need to be maintained, updated, questioned and changed. Both for national and international projects – specifically for the thematic networks that have been founded to provide metadata to Europeana – after the initial start-up phase the question ultimately comes what to do when the project funding ends. Different answers are possible to this question, and ultimately there is no one-size-fits-all solution.

Meanwhile, the web is not what it was when the project was written or even when the work started, Eagle remains a unique resource thanks to the broad network that has been engaged to cooperate on it and agreed to provide a wealth of materials to the platform. From the technical side, research into user engagement and into tool building for optimal engagement has been performed and the requirements and demands laid out.

In this final phase of the project we took a number of steps to secure the survival of the online resource.

First of all, as detailed in DE1.3 – EAGLE Second Periodic Report, the overall EAGLE dataset is complex but not very large by modern standards (= of the order of a few TB, including the images

currently stored in the various databases of which EAGLE is comprised[5]), hence its upkeep costs in the long-term will be very reasonable. Their order of magnitude makes them easy to absorb within the overheads of a large academic institution.

An agreement exists to this end between the EAGLE Consortium, Sapienza Digital Library (the digital library of the University of Rome, http://www.uniroma1.it/strutture/digital-library) and CNR-ISTI for the latter to host and maintain the EAGLE IT infrastructure after the EC funding expires.

Furthermore, some of the partners in the EAGLE Consortium have expressed their intention to support the EAGLE portal in the coming years through a small yearly subscription fee which they will paid.

The decision to create something that would keep the partners together also beyond the end of the EAGLE project raised since a long time within the consortium, and the **positive experience** of **PHOTOCONSORTIUM[6]** (International Consortium for Photographic Heritage), a non for profit association born as an outcome of the Europeana Photography project, whose purpose is the promotion and enhancement of the culture of photography and the photographic heritage, also confirmed us this decision to be a very good one and most promising for future success, considering the wealth of expertise, networking, know-how, and tools that the project produced.

The most tangible outcome of the sustainability discussion and strategy in EAGLE is **IDEA, The International Digital Epigraphy,** the project's spin-off association that builds upon the legacy of EAGLE[7] which will be formally established on May 09, 2016.

Furthermore, new funding is being sought in order to extend the scope and the duration of EAGLE: several applications have been or are being submitted to HERANET, Mellon Foundation, and the EC - for a new Horizon2020 projects.

The two Flagship Apps are being used as demonstrators/case studies for to attract as many software developers as possible. A viable licensing model a future application ecosystem is being investigated; the latter will be designed so as to attract as many software developers as possible.

In addition The EAGLE IT infrastructure is fully open to qualified software developers, each of whom can be enabled according to the level of access and of functionality that s/he requires.

 More specifically:

Access control:

- For all AOI-PMH users (e.g. Europeana) access is free of control.

- For "not open" users (e.g. the EAGLE Portal) access is currently controlled wrt the type of the invoked services (i.e. read, write, admin). Access list based on the IP address of the requesting server(s) could be easily implemented.

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[5] The total data size could theoretically reach a couple of hundreds of TB in case the original camera negatives were to be rescanned at high resolution; this however doesn't affect significantly the outcome of the calculations for the long-term sustainability, which at any rate have been made in the absolute worst-case scenario consisting of all the partners rescanning their camera negatives at high resolution and then defaulting.

[6] http://www.photoconsortium.net/

[7] An agreement will be put in writing and signed by May 9, 2016 (see ANNEX I).

As to the Search Services:

- The Search Service is based on SOLR index and is publicly reachable at: http://search.eagle.research-infrastructures.eu/solr/EMF-index-cleaned/select?q=* .

- It replies to queries compliant with SOLR syntax.

- Its counterpart accepting CQL queries can be found at http://node0.d.eagle.research-infrastructures.eu:8080/is/mvc/index/EMF-index-cleaned/cql.do/select?q=*.

As to the Aggregated Content:

- The OAI-publisher service can be reached at: http://oai.eagle.research-infrastructures.eu/oai.do?verb=ListRecords&metadataPrefix=edm.

- This is the service used by the ingestion process of Europeana and complies with the EDM model.

- An equivalent access point to the EAGLE model could be made available as well.

As to the Image Manager Services:

- The APIs used by the Mobile Apps are introduced in D4.2.2

Creative industries are being encouraged to make use of EAGLE already. For instance, we have had expressions of interest from www.museotechniki.com, who would like to be able to draw from the EAGLE dataset in order to produce and market new archaeology-themed content. Moreover, the Ancient History Encyclopedia (http://www.ancient.eu/) would like to use EAGLE assets to produce gadgets and souvenirs.

This document aims at defining how to realise a possible transformation of the EAGLE project into a **self-sustainable ecosystem** as **portfolio of tools and services** after the completion of the project's currently ongoing funding.

2   THE EAGLE ECOSYSTEM

2.1   COMMUNITY AND BEST PRACTICE NETWORK

This Section is taken from D6.5 Dissemination Report and it is reported here for the sake of completeness to summarise the main results of the project in terms of community building.
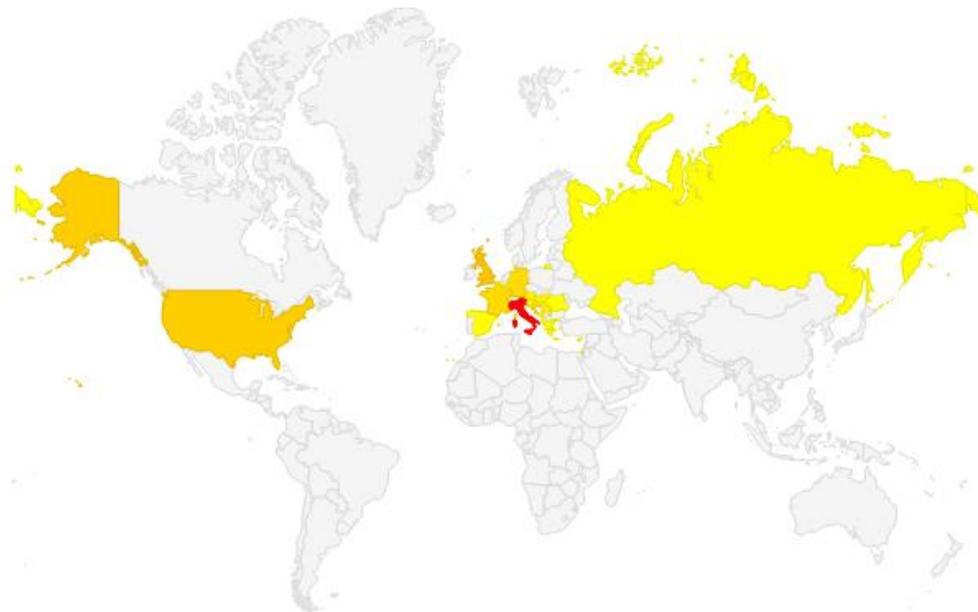
Figure 1 The EAGLE Best Practice Network Geographic Spread

2.1.1   Community

We are always been aware of the fact that the creation of an epigraphy portal is as much a social achievement as it is a technical one. It is plain to us that the greatest avenue of development for EAGLE is participation. This is our most important affirmation and must be kept in mind at all times: a solid approach is more important than an airtight mastery of the technology, since the latter is constantly evolving while the former is based on sounder and less fickle variables.

For the reason given above, EAGLE's top priority has been the establishment of strong links with the epigraphic and classical studies communities and with the general public.

To this end, the Consortium is sharing knowledge and experience with institutions/experts whose interests are germane to the project, a well as with independent scholars, students, and lovers of culture.

In order to do this, three Working Groups (WGs) have been established within the Consortium, focusing on:

- Content harmonisation (including GIS and terminologies)
- Content curation and translation
- IPR and user engagement

The EAGLE Working Groups are the main channel for sharing and extending the activities of EAGLE to other institutions, encouraging them to select and post content on EAGLE and Europeana. At the beginning of the project, the EAGLE Best Practice Network was composed of nineteen partners from thirteen European countries.

Thanks to the work of the WGs and of the EAGLE partners the EAGLE BPN has tripled the number of its official partners by means of the Affiliation Agreements, Cooperation Agreements or Memorandum of Understanding[8].

These data indicate **that the project succeeds in stimulating interest and participation** within its target community.

2.1.2 EAGLE and Europeana

EAGLE established a strategic partnership with Europeana Foundation ensuring liaison and creating synergies in best practice areas such as content harmonisation, multi-linguality, multi-culturality and semantic interoperability. The EAGLE BPN actively participates in Europeana's decision-making and dissemination activities by attending the meeting organised by Europeana and staying updated on Europeana's progress and plan.

UHEI and Wikimedia Italia participated in Task Force for Europeana called "Wikimedia Developments": http://pro.europeana.eu/blogpost/new-recommendations-outline-ways-to-strengthen-europeanas-future. The purpose of this task force is to create an overview of all existing and planned developments that involve both Europeana and Wikimedia projects, including a list of all involved parties and a description of the (expected) outcomes. This overview aims to facilitate cooperation and alignment across Europeana-related Wikimedia developments taking place in the current projects. The task force also aims to gather best-practices and lessons-learned in all of the developments that are listed in the above-mentioned overview and the wider GLAM-Wiki initiative. Lastly, this task force aims to publish a report with recommendations on how to further improve cooperation between Europeana and Wikimedia in a way that is mutually beneficial.

2.1.3 EAGLE and Wikimedia Italia

The EAGLE BPN's other key collaboration is the one established with Wikimedia Italia.

The EAGLE MediaWiki, which represents the first independent application of Wikibase, has been successfully launched and it serves as a framework for the crowdsourcing of translations, contributing to increase the visibility of the project.

2.1.4 Cooperation with other projects/programmes

Other valuable collaborations have been established with the following initiatives:

The **Perseus Digital Library** (http://www.eagle-network.eu/about/partners/perseus-and-perseids/): The two teams will explore their mutual interest in epigraphy. Questions to be addressed include identifiers for and the format of digital editions for epigraphy, imaging and the

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8 For a description of the affiliation process to EAGLE, see: http://www.eagle-network.eu/about/get-involved/

relationship between text and object, as well as vocabularies and alignments between languages. Developers from EAGLE and the Perseids Project at Perseus will also explore opportunities for cross-platform integration, enabling data sharing and linking between the EAGLE Wikimedia environment and the Perseids collaborative editing platform.

Pelagios (http://www.eagle-network.eu/about/partners/pelagios/): Pelagios 3 is a Linked Open Data initiative, in which independent online resources are linked together by annotating common references to places (currently ancient Greek and Rome, but soon to be expanded) as defined in a URI-based gazetteer. These annotations can then be aggregated either by member projects or third parties for a variety of purposes, including search, contextualisation and visualisation. Pelagios 3 encourages open access wherever possible although its only requirements are that annotations conform to the Open Annotation specification and use a URI-based gazetteer. Pelagios 3 also offers a demonstrator API for the purposes of facilitating interaction between projects but makes no claims regarding ownership or responsibility for the content of Pelagios 3 partner projects or the quality of annotations produced by them. Pelagios 3 is led by the University of Southampton, the Open University and the AIT Austrian Institute of Technology, but maintains a strong ethos of collaborative development and the development of specifications for 'Pelagios-compliance' and recommendations for Best Practice are usually developed in consultation with partners. Pelagios cooperate in the framework of Task 2.3 "Content harmonisation guidelines, including GIS and terminologies" in order to specifically in order to:

- contribute to a useful and seamless harmonization of data about places by aggregation, linking and annotation

- exchange and elaborate best practices for networking and enhancing data value via LOD practices.

- explore ways in which to associate further resource

- maximise useful interaction among digital projects dealing with the ancient world

- activate a valuable network of specific projects to guarantee maximum quality.

Attic Inscriptions Online (AIO) (https://www.atticinscriptions.com/): AIO publishes new, authoritative English translations, based on up-to-date texts, of the largest corpus of Greek inscriptions, that of Athens and Attica, with the objective of making the inscriptions more accessible, not only to researchers, but also to teachers and learners, and to a wider public. This is very much in tune with the objectives of EAGLE, which promises to provide an excellent framework for integrating AIO's translations with other relevant online material and resources.

The **Pontifical Commission for Sacred Archaeology** (PCAS) (http://www.vatican.va/roman_curia/pontifical_commissions/archeo/inglese/documents/rc_com_archeo_pro_20011010_pcas_en.html): The Pontifical Commission was created by Pope Pius IX (January 6, 1852) to take care of the ancient sacred cemeteries, look after their preventive preservation, further explorations, research and study, and also safeguard the oldest mementos of the early Christian centuries. PCASput at the disposal of scholars of epigraphy its rich Photo Archive with thousands of pagan and Christian inscriptions from the catacombs of Italy with the aim to making the epigraphic material more accessible, not only to researchers, but also to teachers and learners, and to a wider public in a fruitful collaboration with other partners of EAGLE. PCAS is supported by Regesta.exe (http://www.regesta.com/info/), an internet company

specialized in shared web Multimedia Archives and Linked Data Technologies that provides services in the Cultural Heritage sector.

Rodopis (http://www.rodopis.org/): This cooperation lead to the involvement of Rodopis members in the project's User Engagement activities (via its network of members and friends). It may also facilitate a significant contribution to our Wikimedia Commons contents through the addition of links to EAGLE databases. Rodopis cooperated with EAGLE in organising intensive workshops on Digital Humanities and the digitalisation of texts in Italy. Rodopis is a cultural association of students, researchers and people interested in Ancient History. In recent years, Rodopis members have carried out several initiatives for promoting the study of Ancient History, both in and outside the academic world. Many of the events organised by Rodopis are tightly linked to research. The most important among these are the cycles of graduate and postgraduate seminars "Ricerche a Confronto", which were held in many Italian universities (Bologna, Trento, Roma Tre, Torino, Cagliari). In addition to this, the association has organised international Postgraduate Conferences in Classics. Rodopis also focuses on the divulgation of Classics-related themes.

ATHENA PLUS (http://www.athenaplus.eu/): The two projects agree on the following topics of cooperation:

- explore, analyse, discuss and share expertise on the topics of reciprocal interest (e.g. Multilingualism, Terminologies, IPR etc.);

- present and use specific activities, tools (as the Terminology Managament Platform), results and other outputs carried out in the framework of both project;

- participate in surveys and testing activities launched by both projects (if applicable);

- illustrate relevant good practices in the topics of reciprocal interest (e.g. through distribution of key project deliverables);

- participate in training activities;

- contribute to disseminate the results of the projects in the framework of both communities of interest (e.g. in conferences, meetings, news and logos on the website, communication tools, etc.

Ashmolean Latin Inscriptions Project (http://www.ashmolean.org/ashwpress/latininscriptions/). All of the Ashmolean Latin inscriptions which appear in their catalogue, as well as accompanying information, should be searchable in EAGLE by autumn 2016, and users will be able to benefit from their online tools and links to relevant inscriptions in other affiliated collections.

Europeana Space (http://www.europeana-space.eu/) is a Best Practice Network project funded by the EC within the framework of the CIP BNP Programme. Its aim is to create new opportunities for employment and economic growth within the creative industries sector based on Europe's rich digital cultural resources. A Memorandum of Understanding has been signed on the following basis:

- The Europeana Space project provide an open environment for the development of applications and services based on digital cultural content.

- The use of this environment will be fostered by a vigorous, wide-ranging and sustainable programme of promotion, dissemination and replication of the Best Practices developed within the project.

- To foster the widest participation possible to the Europeana Space Network, a Stakeholder Group is created, composed of representatives ranging from public institutions and universities to creative industries and technology developers. The Stakeholder Group is an important interface between the smallest of the creative industries and the larger companies with an interest in creative innovation.

2.1.5 Best Practices from the EAGLE Working Groups

Another fundamental task of the EAGLE project has been producing a set **of Best Practices and Guidelines in the field of Digital Ancient Epigraphy**. The Working Groups structure allows the project to examine a number of pressing issues and topics in the field of epigraphic digital collections in order to facilitate best practices identification.

The EAGLE WGs produced several Best Practice Documents reporting guidelines and solutions to daily digital content problems by involving internal and external experts either selected from the networks of the EAGLE partners, or approached based on their excellence in the working group topics (see WP2 Table and deliverables D2.2.1/D2.2.2 and D2.3.1/D2.3.2).

2.2 THE EAGLE COLLECTIONS

The EAGLE collections include a great variety of inscriptions written in Greek, Latin and other ancient languages and have been assembled with the two-fold criterion of historical-cultural significance and strong thematic unity. The following databases are featured:

- Arachne
- Archaia Kypriaki Grammateia Digital Corpus - Inscriptions/STARC collection
- Epigraphic Database Bari – Epigraphic Documents of Christian Patronage
- Epigraphic Database Heidelberg
- Epigraphic Database Rome
- Hispania Epigraphica Online
- PETRAE
- The Last Statues of Antiquity
- VBI ERAT LUPA

In an increasingly crowded landscape of digital cultural heritage providers, EAGLE and its partners offer users very specific and unique qualities, such as **trustworthy, authoritative collections**: these qualities will become the differentiating factors of our collective value proposition to end-users. **In the field of papyrology and epigraphy**, **EAGLE is** *de facto* **the unchallenged leader**.
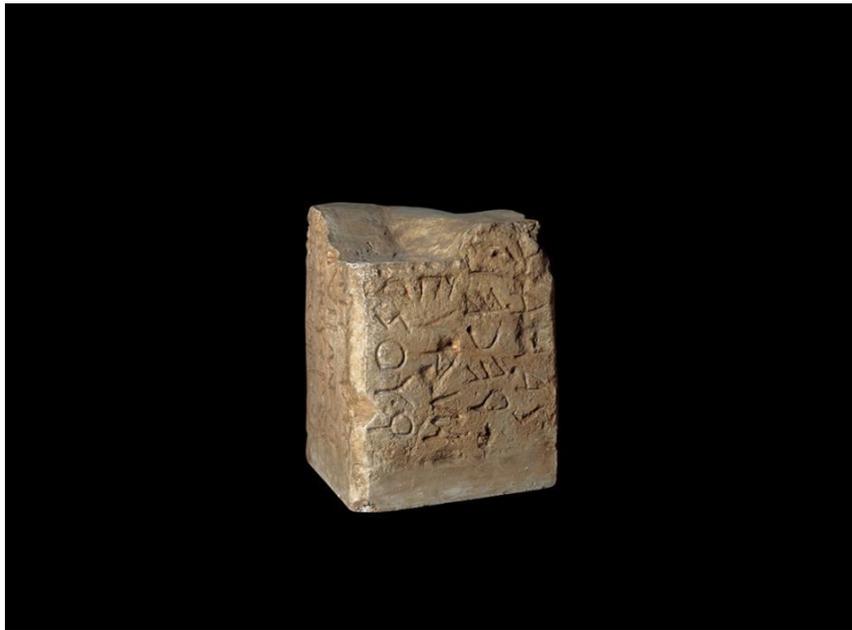
Figure 2 Forum Romanum, Cippus, Rome. Truncated obeliskoid cippus of Grotta Oscura (Veientine) tufa, in situ [...] in the Forum Romanum, Rome; unearthed in 1899 near the Rostra, under a black-marble pavement commonly since called the Lapis Niger. Late-6th (?) cent. B.C.

With **1.5 million items** available, EAGLE is assembling a critical mass of cultural artifacts in the field of ancient Greek and Latin Epigraphy. **By April 2016 the project had already far surpassed its goal, collecting more than 1 million items** that are also already been published and are searchable on Europeana.

We are aware however, that quantity by itself is not enough. **End-users** are increasingly critical of quality and want **content** to be easy to find, **accurate, informative, re-usable and sharable.**

That is why metadata quality is the main focus of EAGLE's team. Improving the quality of metadata makes it reusable for further developments and projects. We are excited to involve leading institutions in the field of Ancient Epigraphy in this process as they have the best knowledge of their own collections.

By working together, both the **quantity** and the **quality** of EAGLE's **data increased**, offering our end-users a better and more **meaningful experience**.

Eagle is an active member of the **Epidoc Community** and produces large amounts of raw Epidoc as open data for further development, tools for up-conversion and crosswalking, and guidance and workflow advice for partners.

The EAGLE Best Practice Network has chosen this lively and extremely accurate **subset of TEI** to describe texts for the benefit of the international community. EAGLE is the fourth main milestone in the development of Epidoc throughout the years, contributing the largest group of inscriptions ever published in XML-Epidoc.

EAGLE is delighted to collaborate with many prestigious and outstanding initiatives: the **Perseus Digital Library**, **Pelagios 3**, **Duke Collaboratory for Classics Computing (DC3)**, **the Istitute for the Study of the Ancient World (ISAW)**, **ARIADNE**, **3D Icons**, **AthenaPlus**, **Wikimedia Italia** and **Wiki Loves Monuments**, **Europeana Space, Digital Invasions.**

2.3   PORTFOLIO OF TECHNICAL TOOLS AND SERVICES

2.3.1   Aggregation and Image Retrieval System

Among the services that can be exploited for future sustainability of the project results we mention the search and retrieval services offered by the AIM Infrastructure discussed and defined in D4.2.2.

The **AIM (Aggregation and Image Retrieval system)** infrastructure contains **a portfolio of technical tools** that can be used to search and retrieve Eagle material in an innovative way. In addition to the traditional text search and metadata access functionality it also offers the possibility of searching using visual query, in the form of image similarity queries or image recognition queries. In one case, a query retrieves pictures that are visually similar to the image query. In the other case, the system tries to recognize the image content to provide users with information contained in the picture.
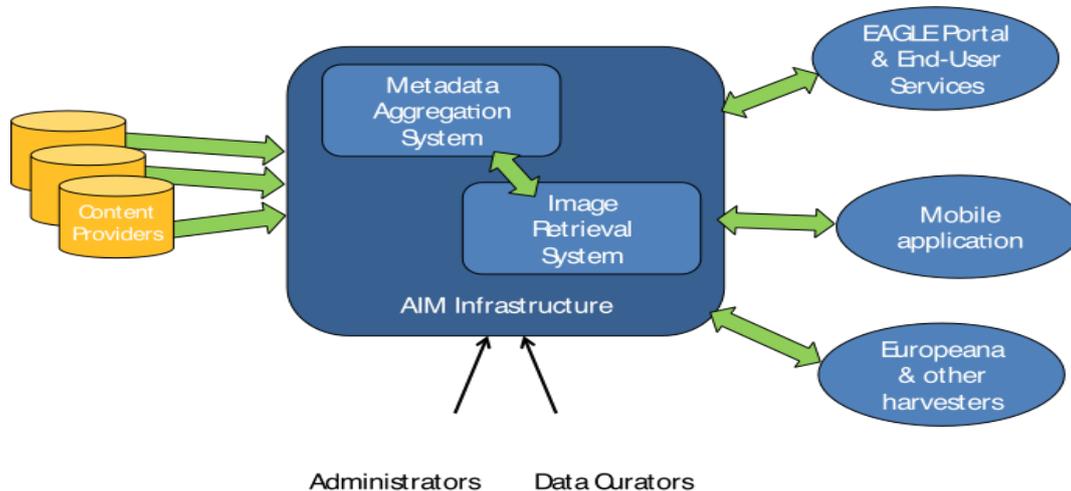
Figure 3 - High level view of the EAGLE services

These features are exposed as REST API and were used both to build the **Eagle Flagship Mobile** application and the **Eagle Web Portal.**

The API can be also made public, so that third parties can build their own mobile or web applications leveraging on the Eagle services. For instance a museum can decide to offer its visitors a mobile application that allows pointing the camera to an epigraph, in the exhibition, to get information, or to interact in augmented reality.

Access to the Eagle API can be **made free** with some limitations, which can be unblocked purchasing a **premium subscription** to the service. The specific details of the pricing model will be defined after contacting a certain number of possible parties, interested in these services, and will be revised according to their acceptance and usage.

For instance, as often happens in "**freemium" on-line services**, limitations can include maximum number of monthly requests, response time, portion of data that can be retrieved, or type of usage licensed.

In the following we give a brief description of the available services.

2.3.2 Image Recognition API

The Image Recognition Service provides a REST API to query the index. It provides a service that gets an image and returns an XML response containing either the metadata of the recognized epigraph or a "NOT IDENTIFIED" message. The epigraph metadata are retrieved through the Metadata Aggregation System.

This API is used by the EAGLE user interface whenever it receives from a user (either through a browser or through the mobile application) an image to be recognized.

Service address**: *http://virserv101.isti.cnr.it/fma/services/IRServices/recognize***

Please note that the service address is temporary and it will change when the services are deployed on Eagle servers.

HTTP request type: **POST Multipart**

*Supported images formats: **JPG, PNG***

Image encoding: either **binary** or **Base64** encoding (by *Apache Commons Codec* library).

Parameters:

- **img**   *inputstream* of an image (mandatory).

- **correlationId** optional

Returns:

- XML structure containing the metadata of the recognized epigraph.

HTML Call Example:

```
<form       method="POST"       enctype="multipart/form-data"       name="test"       action="
http://virserv101.isti.cnr.it/fma/services/IRServices/recognize">
    Query <input name="img" type="file">
    <input type="submit" value="Search" name="submit">
</form>
```

HTML Testing page:

http://virserv101.isti.cnr.it/fma/recognizeTesting.html

2.3.3 The Similarity Search API

The Similarity Search REST API gets either an image or the ID of an image already in the CBIR index and returns an XML response containing a list of the most similar images to the query ranked in decreasing order of similarity.

The user can search similar images by uploading an image or by providing an URL to an image (this is known as Query by Example) or by providing the ID of an epigraph already in the index. This second case is useful to find epigraphs similar to the one already obtained as the result of a metadata search. The search result is a list of image IDs, ordered with respect to the decreasing value of the similarity.

Service address**:** ***http://virserv101.isti.cnr.it/fma/services/IRServices/searchSimilar***

Please note that the service address is temporary and it will change when the services are deployed on Eagle servers.

HTTP request type: **POST Multipart**

*Supported images formats: **JPG, PNG***

Image encoding: either **binary** or **Base64** encoding (by *Apache Commons Codec* library).

Parameters:

- **img**   *inputstream* of an image (mandatory)

- **correlationId** optional

- **nResults**   optional, number of results (default 30)

Returns:

XML structure containing a list of the most similar images to the query ranked in decreasing order of similarity.

HTML Call Example:

```
<form method="POST" enctype="multipart/form-data" name="test" action="http://virserv101.isti.cnr.it/fma/services/IRServices/searchSimilar">
   Query <input name="img" type="file">
   Num of Results <input name="nResults" type="text" size="5">
    <input type="submit" value="Search" name="submit">
```

```
</form>
```

HTML Testing page:

http://virserv101.isti.cnr.it/fma/similarityTesting.html

2.3.4 The Text Search API

The Text Search API provides a REST API that gets in input a query string and returns a sorted list of the most relevant epigraphs related to that string. It calls the Metadata Aggregation System to perform the text search.

The response format is the same as the one provided in response to a simple query for artifacts done at the EAGLE portal

Service address**: http://virserv101.isti.cnr.it/fma/services/IRServices/textSearch**

Please note that the service address is temporary and it will change when the services are deployed on Eagle servers.

HTTP request type: **GET**

Parameters:

- **text**   query text provided by the user on the mobile device (mandatory)

- **nResults**   optional, number of results (default: 30)

Returns:

- XML structure containing a sorted list of epigraph metadata. The format is exactly the same as the one provided in response to a simple query for artifacts done at the EAGLE portal (see the Developer's Guide)

HTML Call Example:

```
<form     method="GET"     enctype="multipart/form-data"     name="test"     action="
http://virserv101.isti.cnr.it/fma/services/IRServices/textSearch">

   Text Query <input name="text" type="text">

   Num of Results <input name="nResults" type="text" size="5">

     <input type="submit" value="Search" name="submit">

</form>
```

HTML Testing Page

http://virserv101.isti.cnr.it/fma/textSearchTesting.html

2.3.5 Get Metadata API

This REST Service gets an epigraph ID and returns the full metadata of that epigraph. It queries the Metadata Aggregation System to retrieve the epigraph metadata.

Service address**: http://virserv101.isti.cnr.it/fma/services/IRServices/getMetadata**

Please note that the service address is temporary and it will change when the services are deployed on Eagle servers.

HTTP request type: **GET**

Parameters:

- **id**   ID of the epigraph to get

Returns:

- XML Metadata of the required epigraph.

HTML Call Example:

```
<form method="GET" name="UITestForm" action="
http://virserv101.isti.cnr.it/fma/services/IRServices/getMetadata">
        ID <input name="id" type="text" size="30">
        <input type="submit" value="Search" name="submit">
</form>
```

HTML Testing page:

http://virserv101.isti.cnr.it/fma/getMetadataTesting.html

2.3.6 The Flagship Mobile Application

The Mobile Application[9], which is available for download both on App Store[10] and on Google Play[11], allows users to get information on a visible inscription by taking a picture from a mobile device, and sending it to the EAGLE server for recognition. The second release implement the full set of functionalities for generic and advanced users that were detailed in the functional requirements.

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[9] http://www.eagle-network.eu/resources/flagship-mobile-app/

[10] https://itunes.apple.com/us/app/eagle-fma/id1077795306

[11] https://play.google.com/store/apps/details?id=eu.blinkster.android.eagle

Users have the choice to perform two types of query. In the "Exact Match" the image is considered as recognized if the best match between the image sent and the images in the repository is above a given confidence level; in the opposite case, no match is found and no record is returned. In the Similarity Search, a list of results ranked in order of similarity with the starting picture is returned to the users. The Exact Match is the default option when the app is started. User can switch to Similarity Search mode in the parameter menu. There, the users have also the opportunity to fine-tune a series of options (like the resolution of the picture sent, or the number of results).

The thresholds for both search options have been adjusted to allow for a better user experience, in particular for Similarity Search. Problems with the access to the results after the Similarity Search that were reported after the first evaluation round were solved.

The services for registered users are now fully integrated with the EAGLE accounts. Registered users have access to the list of the queries and items from the chronology tab. Items and queries can also be saved and synced with the user account on the EAGLE web portal.

Figure 4 - Banner for the EAGLE Mobile Application

2.3.7   The Flagship Storytelling Application

The Storytelling App[12] is developed as a plugin for the WordPress installation of the EAGLE portal[13]. It is fully integrated with the visual style of the project website. It can be used to create epigraphy-based narratives which can include multimedia content from the major repositories (both general and domain-specific collections) of the World Wide Web. The access page, where users can browse the stories, has been enhanced and simplified to support an easier navigation across the published materials. The menus and buttons to interact with the multimedia boxes in the stories have been made more accessible and intuitive for the users; the visual rendering of

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[12] http://www.eagle-network.eu/resources/flagship-storytelling-app/

[13] https://wordpress.org/plugins/eagle-storytelling-application/

the included content (especially the inscriptions) has also been improved. The application now supports more data source and, in particular, it allows users to embed any Epidoc-compliant inscription published online, thanks to a generic renderer run on a dedicated server of the DAI. **The developers of the applications agreed to extend support for the application beyond the life of the official EAGLE project.**

Figure 5 Banner for the EAGLE Storytelling Application

2.3.8 The EAGLE Vocabularies and the EAGLE Media Wiki

Controlled vocabularies that have been developed by the WG1 in WP2. The Working Group supported a best practice methodology which further stakeholders could use for the alignment of medium sized heterogeneous terminologies. The alignment of the vocabularies was carried out following on a previous international effort by the EpiDoc Community agreed by WG1 members. This allowed to keep always track of relevant modification (e.g. new entry and related IDs), and to open up in an easy and familiar way to any interested parties the contribution to the alignment. The Vocabularies are fully integrated in the EAGLE portal (http://www.eagle-network.eu/resources/vocabularies/) and are accessible in Linked Open Data for any users. Usability functions have been also added in order to facilitate use and further searches. These stylesheets allow the matching of contents in the skos vocabulary with the string content of the data provided, so that the dereferenced terms bring the user to a content page where further connections can be explored. For new content providers a process of extraction and enlargement of the vocabularies is carried out by UHEI so that all new terms are aligned and new ones are aligned according to the guidelines (see DE2.2.1).

A further methodology to perform the metadata enrichment is the use of the inscriptions' translations produced within the project (Task 2.2 in WP2).

EAGLE features the development of the first Wikibase platform outside of Wikidata. The extension installed in the EAGLE Mediawiki allows for major *corpora* of online inscriptions to be

imported with their corresponding translations. It also allows for connections with Wikimedia Commons. This approach meets the high quality data modelling while retaining the capacity to meet user engagement and dissemination needs.

Wikimedia works as a meta-social network and it helps in boosting the online visibility of the EAGLE project.

Translations in the Mediawiki are entered from sources outside the consortium and from new partners. The Mediawiki (available at http://www.eagle-network.eu/wiki), also allows to enter data: from registered independent users; from users submitting translations via Perseids integration, a editorial vetting system developed in collaboration with Perseus Project; from batch uploads with pywikipediabot (https://github.com/EAGLE-BPN/eagle-wiki). All data are available to any users, to the EAGLE portal and to Content providers via a RESTful API native of Wikibase, the extension used for this purpose (http://www.eagle-network.eu/wiki/api.php).

Figure 6 - Banner for the Vocabularies and the EAGLE Media Wiki

2.3.9 The QED Animation Workshop

QED Film & Stage Productions Ltd. has produced an animation video for promoting EAGLE online, with the tagline *Delve into the past with EAGLE*. A second promo using cartoons as well has also been planned and storyboarded. The promo, which provided a peppy gallop across four centuries of Ancient Roman history, was very well received and served to illustrate how flexible and entertaining animation can be when put at the service of a cultural heritage mission. Animation offers many advantages over filmed content: ease of production, capacity to easily represent both abstract and concrete concepts, the possibility to effect last-minute changes to nearly everything, capacity to captivate all audiences, ease of stylisation allowing acceptable depictions of traumatic historical facts.

2.3.10 The EAGLE Virtual Exhibition

Signs of Life[14], the Virtual Exhibition curated by the EAGLE Best Practice Network, has been conceived during the Fifth EAGLE international event in Nicosia (11-12 March 2015)

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[14] http://www.eagle-network.eu/virtual-exhibition/

with a simple but effective structure: six rooms which introduce the user to some key interesting aspects of Epigraphy.

The EAGLE Virtual Exhibition can be defined as a set of digital objects and data made available via an online shareable 3D virtual environment for the purpose of preservation and enhanced access to the material curated by the consortium[15].

There are two ways which the reader can access the Exhibition: reading the Web version or entering the virtual space for a fully interactive and immersive tour. In this way the user who likes more to delve into the contents reading them, can start from there; while the more interactive, game like user can experience the contents with a more physical approach, walking in a 3D environment. The contents presented in the two versions are the same, but tailored for the two different kind of users. From each page of the Web version the user can jump back into the virtual museum and vice versa, so that also a mixed tour is fully possible and the two ways of exploring the contents support one another. Wherever possible also connection to other EAGLE resources is given, especially to the EAGLE Storytelling application, the EAGLE Mediawiki and the EAGLE Vocabularies. it can be modulated and tailored to different types of CH.
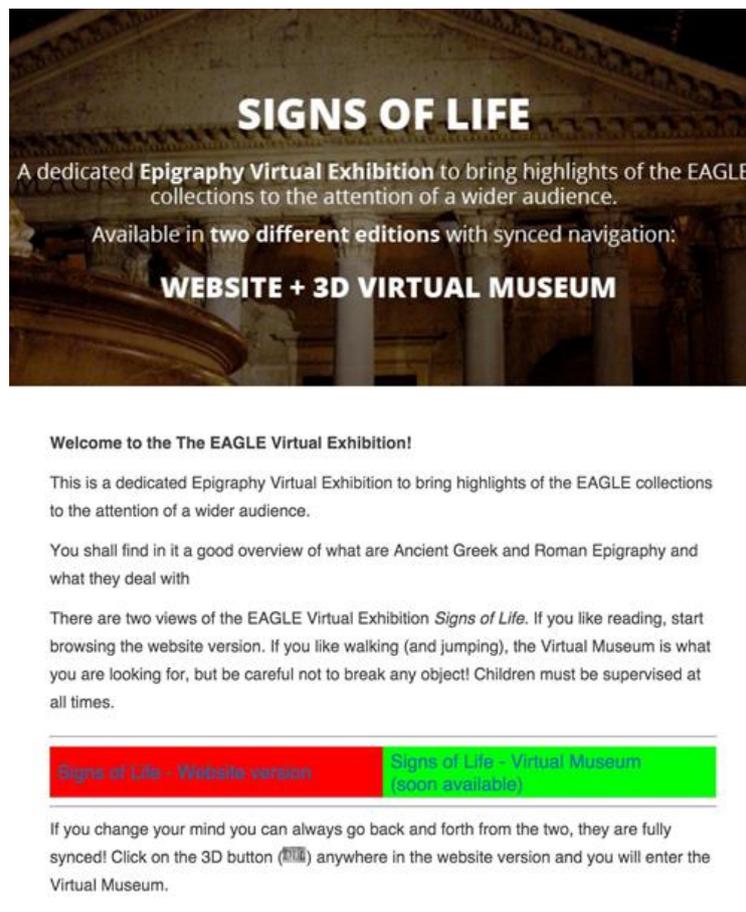

Figure 7 - Start page of the EAGLE Virtual Exhibition

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[15] See D2.7 EAGLE Virtual Exhibition

3   EAGLE VALUE PROPOSITION AND BUSINESS MODEL

EAGLE represents a **community** of research institutions documenting the most recent progress in the study of Classical Epigraphy. By aggregating digital content from unique and **authoritative collections** in its domain, EAGLE brings together a **significant quantity** of information about ancient writings on ancient artefacts.

This will in turn **be useful** for anyone who accesses **Europeana** to study the **classical world** - amongst other things, these people will be able to explore **primary-source materials** never before available on such a **large scale** and from a **single source**. The **visibility** of Europe's **ancient heritage** will also be **increased** as a result of the **collections' richness** and will hopefully lead to improved acknowledgement of its importance as a resource for **scientific research.**

We believe that if we are able to continue to create **value** for **society**, **institutions**, **creative industries** and anyone with an interest in **culture:** EAGLE acts as a **catalyst** for change in the world of cultural heritage. EAGLE is aware of the **value** of **opening up**: if we are to explore new ways of accessing knowledge, we must ensure that sufficient data behind that knowledge is opened up as well. EAGLE shows concrete evidence of the **value** created by the **opening of the metadata.** By improving the quality of the metadata and creating **services** around it, the data are finding their way into the **user's workflow**. We have developed **strategic partnerships**, pave the way for **creative re-use by developers** and provide the infrastructure that offers opportunities for creating new **meaningful ways** to **access** and **interpret culture**.

This section provides the analyses of the market potential and distinctiveness of the functionalities developed in EAGLE and assesses to which extent those results can be promoted as added-value services and product innovation towards potential clients. The approach chosen is to identify which specific tools are addressing the global, actual and current challenges experienced by the cultural heritage content industry, and are best addressing the key business and technical needs of this very fast-evolving creative market segment.

3.1   MARKET DATA

There is a strong market demand for digital tools in the arts and cultural industries. The EC communication on cultural heritage posits that, *"[d]igitisation and online accessibility enable unprecedented forms of engagement"* and that the "*richness of Europe's cultural heritage and the efforts to protect it deserve to be better known by European citizens*".[16] Key innovations so far have been in the field of distribution, with the uptake of social media, user-generated content and mobile apps-related tools. 90% of art and cultural institutions are currently present on social networks. As indicated by DOXA, an international collective of artists, theorists and engineers,

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[16] Towards an Integrated Approach to Cultural Heritage for Europe. http://ec.europa.eu/culture/library/publications/2014-heritage-communication_en.pdf

channels such as YouTube or Vimeo, Facebook, Twitter and LinkedIn have become standard tools for organizations to build and manage their networks and to maintain dialogue with their community. Networks can include audiences, organizations and other professional contacts including funding bodies and academic institutions.[17]

Demand for digital technologies nowadays goes beyond those social and mobile-oriented distribution tools and platforms. According to a recent survey performed by the independent research agency MTM in the UK, if almost three-quarters of cultural and arts organisations now regard digital technologies as essential to their marketing, almost 60 per cent consider them equally essential for preserving and archiving their work, as well as for performing their operations (57 per cent and 56 per cent respectively).[18]

Metadata management especially offers strong market opportunities. There is still ground, needs and demand for innovative breakthroughs into this specific field. As indicated by the Technology Strategy Board in the UK in a recent policy report, technological solutions to unify and make available global meta-data about all content, including commercially available, user generated, public sector and public domain/out of copyright materials, would result in many new opportunities for art and cultural businesses – some as yet unknown and some more easily foreseeable. Further exploration into the potential value of technologies that accelerate and automate the process of creating (tagging) and archiving meta-data throughout production is highly needed and encouraged[19].

DOXA, indicates that cultural organisations are still facing a number of challenges when embracing digital distribution, including developing resources and skills to support the work, intellectual property issues and finding new revenue streams through digital tools. Managing contracts, rights, use and royalties remain a key challenge for content providers. Many of their IPR management tools aren't sophisticated enough to track all the permutations and combinations of rights given the current context of growing databases of content on the one hand and increasingly diverse distribution and use schemes on the other hand. This prevents content from being distributed in a quick and efficient way through multiple digital platforms and moreover increases the risks of litigations and contract violations.

In terms of new revenue streams, art and content organisations nowadays have to provide their potential clients with much more than content.

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[17] *Digital Futures in Policy and the Cultural Sector in the UK, http://www.diversite-*

culturelle.qc.ca/index.php?id=106&no_cache=1&L=1&tx_bulletinsirre_pi2%5Byear%5D=2013&tx_bulletinsirre_pi2%5Barticle%5D=94

74&cHash=7a19c60a1efd4137f3d4a0a3e4b81070

[18] *Digital Culture: How Arts and Cultural Organisations in England Use Technology 2015, http://artsdigitalrnd.org.uk/wp-*

content/uploads/2015/12/Digital-Culture-2015-Final.pdf

[19] *Creative Industries Strategy*

https://connect.innovateuk.org/documents/3220887/3676376/Creative%20Industries%20Strategy%202013-2016

Digital sites should not only promote cultural heritage but also serve as a set of online resources and tools for further creative experiences. The digital media industry currently has to reinvent itself to meet ever-evolving demands not only for new content, but also for solutions and services that customers will value. As highlighted by DOXA, in the digital age, moving beyond the model of presenting and delivering work to audiences, cultural organisations should take the role of facilitators by creating the tools, platforms and resources to encourage learning, sharing, creation and dialogue. Content packaged and bundled with capabilities is considered a must-have in the arts industry, likely to open strong opportunities for additional revenues. Education-related tools are a very promising market segment that allows creating tight and sustainable relationships with key industry practitioners. 38% of arts organisations currently develop specific content and online events for schools and other educational-related audiences. Tools that develop the analytical capability to extract knowledge and value from a given content are considered extremely valuable.

Another challenge reported by arts and cultural content providers when trying to monetise their content is the need for further interoperability. As indicated by the Technology Strategy Board in the UK, producers need to develop the tools and work processes that allow them to re-purpose content and assets for use in different contexts and across an ever more diverse range of devices. The migration of content across different media networks and platforms offers creative businesses opportunities to extend services, interact more with audiences, target new demographics, and develop completely new service and experience formats. As a result of this, cross-platform production is becoming increasingly central to content businesses. However, it is still an emerging field and many businesses, established in different sectors, are struggling to respond to the opportunity.

Last but not least, in terms of resources and skills, customer relationship management tools are globally reported to be an acute need at arts and cultural organisations. Fewer than 44% of cultural organisations report to currently use data to identify and engage with their most valuable audience members.

Content providers require further intelligence about the movement, sharing, and consumption of content in their networks of end users. The few organisations that are exploring the use of data and insight are seeing an impact on their revenues as well as audiences.

The EAGLE services and products have been listed in 2.3: they constitute the main value proposition for EAGLE and are ideally fitted to answer the here-above described needs.

3.2 EAGLE STAKEHOLDERS

The EAGLE platform involves two different types of stakeholders:

• Epigraphic content owners willing to distribute it on the one hand and business owners;

- Individuals interested in accessing such content on the other hand (for purposes such as teaching, gaming, animation, tourism, etc.).

In theory, both groups are potential strategic targets for the commercialisation of the platform.

Ground experience with innovative businesses however clearly demonstrates that pursuing a **two-sided delivery** approach is a very tricky issue for new entrants in networks and platform-related industries; with limited resources, allocating marketing and sales efforts to different stakeholders while recovering costs is typically considered a very fierce challenge. As outlined by many analysts, in order to trigger a network effect, it might be considered interesting to subsidize one side to attract the other one and/or focus on one specific target group of paying customers rather than addressing multiple audiences and revenue streams.

Thus, in order to maximise the exploitation potential, according to the experts' recommendations and the lessons learned from ECLAP and Europeana Photography, the best way is to position EAGLE as a **portfolio of technical tools and services** in the hands of content providers. That positioning is considered to be more distinctive and is expected to provide better short-term results than the marketing and promotion of a more consumer-oriented arts content delivery platform, for at least two reasons:

- A community of small and fragmented end users require huge advertising efforts to be successfully acquired;
-
- Being considered as mere content suppliers is somehow deterrent for the cultural and creative organisations.

That strategic focus on content providers goes into the same direction as the one recommended by the project reviewers during the second review meeting: *consider and promote the specific technical functionalities which can be exploited and marketing the business concept as a whole ecosystem.*

With the **portfolio approach**, the collated outcomes of EAGLE are presented as a robust set of content archiving, aggregation, production, management and publishing functions, allowing content providers to better market, publish and cultural heritage content towards specific educational, cultural or creative end users.

3.3 COMPARISON TO RELATED SERVICES

A comparison of EAGLE services with respect to other content and epigraphy portals has been performed and reported in a short overview in the table below. The most attractive services are compared with respect to EAGLE on the basis of the major requirement areas.

From the table, the competitive advantage of EAGLE with respect to the state of the affair portals is evident. It should be noted that most of the archiving solutions do not present

aggregation tools. These are typically stand-alone tools. On the other hand, EAGLE directly integrates a set of tools for semantic enrichment to establish aggregation and relationships among content.

	EAGLE Europeana	EAGLE	Searchable Greek Inscriptions	Attic Inscription Online	Corpus Inscriptionum Latinarum	Epigraphic Database Clauss-Slaby	The Etruscan Texts Project
Networking and collaboration	Y	N	N	N	N	N	N
Aggregation	Y	N	N	N	N	N	N
Multilingual Search and retrieval	Y	Y	Y	Y	N	Y	Y
Multilingual metadata	Y	Y	Y	Y	Y	Y	Y
Text search	Y	Y	Y	Y	Y	Y	Y
Similarity search	Y	N	N	N	N	N	N
Image recognition	Y	N	N	N	N	N	N
Get Metadata	Y	N	N	N	N	N	N
Multilingual Wiki	Y	N	N	N	N	N	N
Controlled Vocabularies	Y	Y	Y	Y	Y	Y	Y
Linked Open Data	Y	N	N	N	N	N	N
Storytelling Application	Y	N	N	N	N	N	N
Virtual Exhibition Tool	Y	N	N	N	N	N	N
Connection with Europeana	Y	N	N	N	N	N	N
LOD	Y	N	N	Y	N	N	N

3.4 SWOT ANALYSIS

It is possible to outline in a schema (i.e. the classical SWOT matrix) the main key factors seen as important for EAGLE.

The SWOT analysis groups key pieces of information into two main categories:
  • internal factors – the strengths and weaknesses internal to the organization

- external factors – the opportunities and threats presented by the environment external to the organization

SWOT analysis can be used effectively to build a strategy with defined objectives. The SWOT matrix of EAGLE at this stage can be drafted as follows:

STRENGTHS	WEAKNESSES
Network/Collaboration • Enthusiasm and **commitment** of the EAGLE partners in keeping the portal alive; • **Strategic partnerships** with Europeana, Wikimedia • **Media Partnerships** with Archeomatica, Ancient History Enciclopedia, Forma Urbis and Digital Meets Culture • Wide range of **expertise** and know-how in different fields; • Three **Working Groups** that offer best practice guidelines epigraphy • **Geographical spread** • **Brand** reputation	**Network/Collaboration:** • Partners might focus their attention and resources to other, newly funded projects when the project period ends
Content/Context • World **largest database** of ancient epigraphy • **Aggregation** of a diverse and broad range of epigraphic content not available elsewhere; • Contextual information and metadata from **reliable institutions**; • Multilingual access • **Translations**	**Content and context:** • Partner - curated collections not yet used extensively.
Technology: • **Interoperable technology** for providing both metadata and content. • **Metadata** is provided to Europeana. • Use of **open source** software integrated and expanded by project leader CNR-ISTI which makes EAGLE non -dependent upon a third - party supplier.	**Tecnology:** • Technical dependencies and durability (relying on technical developments and architecture).
OPPORTUNITIES	THREATS

- Positioning EAGLE as the **reference epigraphic portal**, both in Europe and globally.
- A live and active Best Practice Network for the epigraphy with partners who have a lot of knowledge and experience.

- Not all project partners can financially invest in EAGLE when the funding period ends.

3.5   BENEFITS

EAGLE partners considers the EAGLE services as necessary tools to promote high quality digital cultural heritage materials that otherwise would remain scattered around different databases and/or inaccessible. The main interests of the partners lied in: a) being part of an international network of organisations focused on documenting, conserving epigraphy and b) contributing to the global dissemination of epigraphy.

In brief, the following long-term, sustainable benefits definitely emerge as a result of the aggregation   occurring within the EAGLE project:

International Context:

- having formed and been part of a rich, varied consortium, which, thanks to the online portal, expands and improves the study of epigraphy;
- consortium a projected towards new and more ambitious projects: benefit of the flagship act
- EAGLE is a very important platform that enabled single archives to become structured and also internationally presented;

Content

- increased volume of digitally-accessible content;
- increased opportunity for international collaboration and usage, due to the multi-lingual nature of the metadata

3.6   END-USER SEGMENTATION AND MOTIVATION

The experience developed so far within EAGLE and also thanks to the work done in the sister project Europeana Space and Europeana Photography and ECLAP identifies 3 macro-categories for the target audience for cultural heritage collections. Such target audience also represents EAGLE's potential client base.

Content holders

- cultural institutions (public and private bodies)
- archives (public and private bodies)

- museums

Content users (no commercial interest in epigraphy)

- research communities
- the educational sector
- activists and amateurs
- the general public, younger and elder generations

Creative industry (business interest in epigraphy)

- Publishing sector
- Agencies for consultancy and services for exhibition management and training in museums and cultural institutions
- Serious gaming industry

These 3 macro-groups are potentially interested in the activities and services provided by EAGLE although with different motivations.

The **content holders** can find in EAGLE expertise and tools to enhance their collections, either huge or micro, via the digital technologies. This may mean for a small city museum to or archive to access information and guidelines for professional archiving and indexing.

The **content users** can get in touch and access many and different collections of epigraphy. The images featured within EAGLE are retrievable via the Europeana portal, thus offering a glimpse of the holdings of the various partner archives. Then, EAGLE can act as a privileged gateway to the individual member-archives, for any purpose. EAGLE also intends to promote epigraphy towards any possible content user with dedicated virtual exhibitions and on-line tools.

The **creative industry** can find in EAGLE ideas and opportunities for testing/developing new products and services, and for accessing a network of potential suppliers and partners – **EAGLE Storytelling App** and **Mobile App** represent in fact a unique **test-bed** for anybody interested in developing services and tools for promoting and making accessible cultural heritage to the general public.

3.7 SUSTAINABILITY STRATEGY AND BUSINESS MODEL

The business model favoured by the externally contracted business analyst for the Products and Services listed above lies in exploitation based on three types of revenue streams: **licensing**, **further development** and **service-related** fees.

This offers more flexibility in terms of pricing than the offer of a full-service platform towards final

end users, which is not expected to generate enough revenues to compensate both content providers and IT service providers - at least in the short term. Content delivery platforms are extremely vulnerable to competition, and need to deliver lots of high-quality content while keeping prices low. The path to a potentially high reward on investment is typically risky and would require very substantial post-development funding, to be invested into massive post-project dissemination, marketing and commercial development activities.

Technology developers in can adopt both a more focused and European-wide strategy by being positioned as IT providers, which aligns with the role they took on in the project itself and in turn shows on the importance of cooperating with content holders to develop in-house tools. Their marketing will target technologists at content providing institutions and will focus on the channels and places that are bringing together ICT practitioners and the creative industries.

The DigiBIC community is a good example of such a specialised dissemination channel. The technological consortium members are fully credible as providers of technology tools to the creative industries, having very strong experience as R&D and software development market players in the field. A potential lack of strong marketing and business skills in-house is not considered as critical as it would be for supporting the uptake and commercialisation of a full delivery platform. Partnerships can more easily be made on specific technologies and tools with established distributors outside of the consortium. As for the content providers, they will be able to benefit from the tools supplied to better valorise and monetise their own content, which is fully in line with their own market positioning, core activities and business interests.

A key identified boost to the promotion of the EAGLE platform as a single product is the homogeneity of the content in terms of languages and balance between countries being represented on the platform. The experience of the consortium in bringing together different industry practitioners and dealing with large sets of multilingual content can even be valued and exploited.

Added value can be provided to any and all single client from day one. Moreover, sustainable commercial exploitation is being made possible with reasonable and achievable additional investments and efforts from the project's stakeholders. Partnerships with further technology firms and content providers outside of the current consortium can be pursued and will open doors for additional exploitation channels for EAGLE.

3.8 BUSINESS MODEL IMPLEMENTATION

EAGLE is a *living lab* in which several new technologies and solutions in the areas of semantic computing and social media have been developed and put under trial of the final users and institutions, with the main aim of aggregating content for Europeana and creating a community.

EAGLE presently comprises more than 35 prestigious international institutions. 19 of them started at EAGLE's early set up in 2013. Others joined EAGLE successively as affiliated and networking partners.

A strong characteristic of the project was the ability to reach out and involve a wide network of stakeholders in the development of the portal. This networking effort has led to qualitative best-practice documents that were distributed and have been taken up by the wider cultural heritage sector. Networking is, so to say, in the group's DNA.

EAGLE partners represent many different cultures and countries from around the world. Participants have been classified as *Content Partners* (former contractors who signed the contract with European Commission and obtained funding for providing content and aggregation) or as *Affiliated Content Partners* (those who signed an affiliation agreement with UNIROMA1 for providing content and using the EAGLE portal and service).

These content partners have marked their interest and commitment in continuing supporting EAGLE after the project's end.

The analysis places the services in an environment of global, cross-sectoral technologies and developments. The advantages that the EAGLE network has offered the project participants are plural: by working in an intercultural environment, EAGLE was able to set up solutions for a range of different professional and supra-national cultures. Development of existing tools took place in close collaboration with end users and cultural heritage professionals. By working with content providers and monitoring user feedback, the best-practice network has managed to develop a stable platform that builds on the work from various technological partners. The developments that have led to this environment are entwined in the particular setting of the EAGLE portal. The various technological partners continue development of these core elements in various other settings and it is in the best interest of the EAGLE consortium to advocate these tools. The platform profits from optimisation efforts and updates that technology partners can perform through third-party use and investments.

The analysis of the main EAGLE technical tools and services given in Chapter 2.3 leads to a strategy that is based on three pillars: licensing, further development and service-related fees.

The intention of the consortium was to find possible revenue sources to provide further funding for the EAGLE services, specifically focused the support by project partners. UNIROMA1, CNR-ISTI and PROMOTER the project's leading partners, will ensure to support and keep the platform available online for a minimum of 5 years following on the end of the project.

The analysis of the outcomes of the project prescribes a model in which **licensing** of the technological solutions by the original technology developers is a necessary aim with an added benefit to the EAGLE consortium. Looking at end-users to pay for content-related services is a road this consortium does not confide in traveling on and outside of the mission of many cultural institutions to increase public access to their collections.

UNIROMA1, CNR-ISTI and PROMOTER's commitment to provide basic support did from the onset onwards include any commitment for the further development of technological

improvements and updates of the EAGLE platform after the project's end.

These would have to come from grassroots initiatives or further time investments on developing other projects. However, the consortium has taken under consideration and agrees to the suggestions provided by the business, which advocates finding investments for the further development of specific technological elements of the EAGLE ecosystem. This approach is in line with the individual developers' business approach to seeking new partnerships and opportunities for expanding their in-house skillset and the technological possibilities of their provided technologies. Concrete actions that follow from this strategy includes:

- The individual technologies in use on the EAGLE platform are currently disseminated through networks such as Europeana Labs and the DigiBIC platform. In this way, the portal itself serves both as an exemplary model for the tools' possibilities and the primary benefactor of further investments in the toolset used on the platform.
- Content providers have been asked for additional resources to develop a business case and attract investors, while CNR-ISTI funds the portal stability & accessibility for up to five years.
- UNIROMA1, CNR-ISTI and PROMOTER's work on the development of a licensing model for particular services and components by external parties, which outlines the options for reuse.
- CNR-ISTI services and components are available as open source and further developed in cultural projects.
- EAGLE is reaching out via H2020 events to parties interested in joining and further enlarging the network or making use of the tools and platform.
- Establishing the IDEA association.

4 STRATEGIC VISION

4.1 IDEA - INTERNATIONAL DIGITAL EPIGRAPHY ASSOCIATION

In light of what was said in the previous chapter, the most fluid, lean, and efficient way to preserve EAGLE's legacy (as agreed upon by the partners and suggested by winning strategies of other projects in the sector) is to establish an entity that is capable of carrying forward the work established by the former partners.

To this end, the IDEA association will be established on May 9, 2016 and its first General Assembly will take place in Pisa on September 2016. President and Vice-president will be elected during the General Assembly, together with the nomination of the members of the Steering Committee and of the Executive Council.

The goal of the association is **the promotion of the use of advanced methodologies in the research, study, enhancement, and publication of "written monuments**", beginning with those of antiquity, in order to increase knowledge of them at multiple levels of expertise, from that of specialists to that of the occasional tourist.

In order to reach its statutory goals, the association **promotes, organizes, and manages conventions, conferences, exhibits** (including virtual exhibits), prizes, and training courses (including online courses); it conducts editorial activities; it **promotes and supports the maintenance and efficiency of the portal created by the European project EAGLE** (European network of Ancient Greek and Latin Epigraphy); it participates in and promotes the participation of its members in projects and initiatives, including in collaboration with third parties; it promotes initiatives in the interest of its members; it performs and encourages studies and research; it collects data and news of interest to the activity of its members; it carries out consultations in favor of its members; it more generally carries out all activities useful for the achievement of the goals that the association proposes. Furthermore, scope of the association is to **expand and enlarge the results of EAGLE** providing a sustainability model **to ensure the long-term maintenance of the project results and to continue to cope with its original aims.**

The IDEA association will be established as a non-profit association with a democratic structure, political independence, and unlimited duration. IDEA allows membership to both natural and legal persons, public or private bodies, companies, and associations. Founded by the partners of the EAGLE project, the association aims to enlarge its network internationally and welcomes new members sharing its aims.

LIST OF CURRENT PARTNERS (April 2016)
- Silvia Orlandi – Sapienza, University of Rome
- Raffaella Santucci – Sapienza, University of Rome
- Antonio Felle – University of Bari
- Anita Rocco – University of Bari

- Giuseppe Amato – CNR-ISTI

- Franco Zoppi – CNR-ISTI

- Antonella Fresa – Promoter S.r.l.

- Claudio Prandoni – Promoter S.r.l

- Luca M.C. Giberti – QED Productions

- Valentina Vassallo – The Cyprus Institute

4.1.1 The legacy of EAGLE

The content aggregated within and thanks to the EAGLE project provide a unique insight into the evolution of European society and history and represents a valuable source for understanding our past from multiple approaches (history, economics, sociology, anthropology, politics, art…). This extremely valuable source of information will be promoted by IDEA through narratives to attract the attention of the general public and to supply new information resources for research purposes.

In addition the knowledge resources developed by EAGLE (e.g. multilingual vocabulary, harmonisation guidelines, Mediawiki) will continue to be available, maintained and updated by the IDEA association.

Finally, the project has built a network of excellence on aggregation and cataloguing cultural heritage, which will continue to be active in the framework of the IDEA association. All the relevant results produced by the EAGLE project will be kept updated in order to offer valuable solutions to the sector"s needs and to prepare to face new challenges. The members of the IDEA association represent a real aggregation of competences able to take care of updating technical documentation and guidelines, taking into account the latest research and technical advances, and promoting best practices and disseminating success stories. Other parties interested in participating and contributing to the network will find in the new association the right place to meet experts and share experiences.

4.1.2 Beyond EAGLE

Digital cultural heritage is considered by the EU to have the potential to become an important driver of economic growth and social innovation. The association will be actively involved in European initiatives and projects to contribute to the achievement of this goal.

IDEA represents a centre of expertise and knowledge on digitization, aggregation of content to Europeana and other portals, metadata standards, indexing, cataloguing and controlled vocabularies, best practices for the management of digital archives, and much more. This expertise and knowledge will be the core to generate activities, provide services, organise training programs and seminars and participate in new research.

The association will be the framework for participation in new initiatives and experimentation activities involving cultural heritage at the European level; as an example, the digitised materials provided to Europeana through the EAGLE project is the basis for the Photography

pilot in Europeana Space[20] (the pilot is led by KU Leuven).

At the same time, the new association will cooperate with crowdsourcing and citizen science initiatives. Cultural heritage is everywhere around us and helps us to enlighten personal and community stories, by visually transmitting ways of life and all kinds of experiences. The citizens" involvement in cultural heritage activities will be a key element for the new association, not only as audience but also as an active actor in the activities promoted by IDEA. An example of how to activate public participation in cultural heritage projects has been the public the participation in the Wiki Loves Monuments challenges as well as the Storytelling App Contest launched by the EAGLE project. Similar initiatives have been launched also in domains germane to EAGLE, such as archaeology. In Italy an initiative called Archeostorie (Archaeostories) has become very popular among the general public.

It is notable that a large part of our cultural heritage is preserved in museum warehouses and not accessible to the general public. It is of the utmost importance that citizens are encouraged to share this wealth of cultural heritage with the whole community. To explore more in depth how to address this participatory research, the association will establish a cooperation agreement with Civic Epistemologies[21], a European project working on a roadmap for citizen researchers in digital culture, to activate citizen involvement in cultural heritage research.

The association's commitment to culture and ancient heritage will bring its members to proactively lead initiatives to value and transmit this rich heritage. The association's activities will create specific programs to reach all target audiences, including cultural institutions, archives, museums, specific research communities, the educational sector, younger and elder generations, the general public, and activists and amateurs in general.

As an initial example of activities targeting the general public, the association will take care of the exploitation at international level of the EAGLE Virtual Exhibition and the EAGLE Promotional video conceived in the framework of EAGLE project.

Furthermore, IDEA will organize and coordinate future virtual exhibitions on specific themes, possibly linked with territorial characteristics and features.

The promotion and enhancement of epigraphic heritage will have in the association a valuable tool to reach its objectives: a dedicated website giving visibility to all the digitised materials.

4.2   IDEA: SERVICES AND TOOLS PORTFOLIO OVERVIEW AND VALUE

Main areas of service to be offered by IDEA are the following:

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[20] http://www.europeana-space.eu/photography-pilot/

[21] http://www.civic-epistemologies.eu/

4.2.1 Publishing to Europeana (AIM tool and support)

The AIM tool is a customized version developed by CNR-ISTI and in use for several Europeana-feeder projects. The peculiarities of the AIM are to be customized for the needs of managing metadata related to CH and to include the multilingual mapping tool specifically tailored for this project.

IDEA can therefore offer an aggregation service to Europeana and also technical training and support for the treatment of metadata related to epigraphy. This service can be offered to individual organizations or to other projects which do not have a technical partner or a service for this activity (e.g. Daguerreobase).

4.2.2 Multilingualism support

The multilingual vocabulary developed within EAGLE will be kept alive and possibly enlarged to other languages and terms. IDEA can offer this tool which can be used either for preparing multilingual metadata for Europeana and to enrich the local database of the content provider.

The MediaWiki, in addition, it revealed itself as unique tool to work on translations of texts through an intuitive and easy-to-use interface.

4.2.3 Training

Online and onsite training can be offered by IDEA members in different fields: metadata workflow and quality procedures, archiving practice and indexing, quality checks, digitization of cultural heritage images/artefacts.

4.2.4 Relationship with International Bodies

IDEA is first of all a network of international partners with a great reputation and important holdings. Anyone who needs to get in touch with the most important archives and agencies in Europe can contact IDEA as a privileged gateway.

4.2.5 EAGLE Flagship Apps

Of all EAGLE services, the Flagship Mobile Application has by far the greatest potential for exploitation, as its image-recognition technology can be leveraged for any situation in which mobile users encounter vast quantities of artifacts, artworks, monuments, buildings of which they know nothing or very little. This situation arises in the majority of archaeological sites in Europe and even more so in Asia, Africa, and the Middle East.

Institutions interested in improving their user experience can commission to IDEA the development of extended Flagship Mobile App functionalities in order to cover their collections.

These same institutions could, in principle, ask IDEA to build in the App further functionalities for managing user-generated feedback and annotations, so as to crowdsource the metadata enrichment of their collections.

As to the Storytelling Application, cholars, students and teachers, curators of museums and digital collections are potential stakeholders in the development of our storytelling editor and publication platform.

The Storytelling app can be adopted as a platform to document their activity and/or manage the assignments for students. Although the cooperation with these initiatives is still ongoing and no results have been published yet, we believe that the use in the class will constitute the most important use case for our platform.

The promotion of digital and museum collection has also proved very fruitful. The Storytelling App is unique in allowing projects contributing to aggregators such as Europeana to include their materials into narratives and blog posts. Via the storytelling platform interested parties could successfully showcase objects of special interests.

The "showcase" potential of the Storytelling App is enhanced by its architecture built on Linked Open Data and aggregation of content from different repositories.

4.2.6 Animation or non-animation Promos and Design services

The know-how and experience provided by EAGLE in collaboration with QED Film & Stage Productions Ltd. allow the efficient production of effective animated promos for any third-party institution wishing to reach out to a wider audience. A roster of directors, writers, researchers, animators, CG artists, designers, composers, editors can be tapped into in order to answer to any query or desiderata on the commissioner's part. QED can also produce filmed content, engaging the services of world-renowned cinematographers if necessary.

QED can also produce Graphic Design for perspective cultural heritage or education institutions; for instance, it has designed the full range of EAGLE's printed materials.

4.2.7 Virtual Exhibition Tools

The modular structure of the EAGLE Virtual Exhibition gives the possibility to further enlarge the space, adding new rooms and new content, in order to further strengthen the future sustainability of the application.

In addition to this, several useful tools can be developed as a service for cultural heritage institutions willing to improve their user experience. Examples of such tools are:

- Adopting customer-specific paradigms of gamification, whereby the user is at the center of a virtual system as a cultural explorer able to transcend the limits of space and time.

- In order to facilitate knowledge extraction and creation in cultural heritage scenarios, intuitive user interface technologies such as mobile augmented reality are integrated into a

virtual interaction platform: during a visit to a physical museum the visitor is able to capture artworks and enter metadata on the fly to build a digital catalog and a personal museum through the generation of custom thematic and conceptual paths.

- Developing emotional and ludic aspects can turn the traditional idea of the museum into something flexible and dynamic: such a 3D museum can be shared and experienced remotely by other users, who can immersively, spectacularly explore the collection.

- This approach will enable learners to engage in highly authentic communication practices, with the advantage to have an online simulation environment in which people from all over the world can work and learn together, with far-reaching implications for pedagogy and teacher training.

4.3   BUSINESS MODEL AND SWOT MATRIX

IDEA constitutes a network of excellence on aggregating and cataloguing epigraphic content. The association **main value** is based on the expertise, knowledge and specific skills on cultural heritage and management of digital archives (digitization, aggregation of content, metadata standards, controlled vocabularies, etc.) of its founding members.

IDEA will offer to the targeted customer segments specific services and activities based on this value, transforming this expertise on concrete **value propositions** responding to specific **market needs**. At the same time, the association will ensure long-term availability and updates of the knowledge resources developed by EAGLE (e.g. multilingual vocabulary, digitization guidelines, MediaWiki).

An initial business model has been developed using the **Business Model Canvas**. Analyzing all the relevant aspects of the canvas has allowed the partners to evaluate the viability of the association, identifying the required revenue streams to ensure the association sustainability. With reference to the CANVAS, the following components are considered: Customer Segments, Value Propositions, Channels, Customer Relationships, Key Partners, Key Activities, Key Resources, Cost Structures and Revenue Stream. An overview of these components is given below.

4.3.1   Customer Segments

IDEA association is conceived as an entity expert on epigraphy heritage. As defined in bigger detail in Chapter 2.3, a wide range of services will be provided to multiple customer segments:

CUSTOMER SEGMENT	CUSTOMER PROFILE
Content holder	• Cultural institutions (public and private bodies) • Archives (public and private bodies) • Museums
Content user	• Research communities • Educational sector • Activists and amateurs of vintage photography • General public, younger and elder generations
Creative industry	• Publishing sector • (Serious) Games • Cultural event organisers (e.g. exhibitions)

4.3.2 Value Propositions

The value propositions delivered to the targeted customer segments are consultancy and personalised services around cultural heritage and its management in the Digital Era. The association is the first consortium at European level and with an international dimension with the specific aim to promote and enhance the culture of written monuments and archeology.

4.3.3 Channels

The main channels to reach our customers will be online channels: website, social media and dedicated communication tools. Complementary to the new dedicated IDEA online channels, the association will exploit all the members" networks and channels to ensure awareness about the association and its value propositions.

The IDEA online channels are already under construction, and the website will be launched soon: http://www.idea.net/.

4.3.4 Customer Relationships

IDEA quality of service will be delivered through dedicated personal assistance to its customers. The most appropriate members with the required skills will be selected to deliver the requested services and take care of all the customer relationship, ensuring quality delivery and customer satisfaction.

4.3.5 Key Partners and Activities

EAGLE partners, as IDEA founder members, constitute the initial key partners, which will be complemented with external suppliers linked to the specific services to be provided (exhibitions transportation and installation, communication services and printing, etc.).

4.3.6   Key Resources

The key resources of IDEA are human resources (expertise of its members) as basis for the consultancy and training services, combined with physical resources to be exploited as the collections curated by the consortium members.

4.3.7   Cost Structures

IDEA is based on a value-driven business model with low fixed costs. The board positions on the association are assumed by the association members on a voluntary basis. The position of a steering committee member is unpaid.

The cost structure foresees two main groups of costs: ordinary and extraordinary. The ordinary costs, necessary for the maintenance of the association, will be covered by the members" dues. All the initiatives of the association must be self-financing. The extraordinary costs are those corresponding to these specific initiatives (both promoted by the association members or as services to third parties). In these cases, the initiatives must have their own sustainability plan, ensuring all the required incomes to cover its costs (could be via sponsorship, public funds, customer contribution, extraordinary members" dues or others).

The costs supported in 2016 for the establishment of the association (preparation of the Statute, notary services and registration, acquisition of the URL www.IDEA.net + other 5 extensions, organization of the first general assembly) will be covered by the 2016 members" dues.

Among the ordinary costs already foreseen for 2016 are included the association visual identity, the IDEA website (software development, graphic design, editorial activity, server, maintenance of the URL domains), the dissemination and communication actions (ex. printed material), the office equipment and supplies as well as other general expenses (rent, heat and lights, water, insurance, Internet access, etc.).

4.3.8   Revenue Stream

The following table lists the services and markets which are expected to generate income:

Services	Description	Client/Market
Consulting on cultural digital heritage	Consulting services for the preservation, transmission and communication of cultural heritage, specially exploiting ICT tools on the Digital Era	Public/private bodies dealing with cultural heritage
AIM Technical tool portfolio and support + Publishing to Europeana	Technical infrastructure and dedicated personalised assistance to publish cultural content in Europeana Access to the Eagle API can be made free with some limitations, which can be unblocked purchasing a premium subscription to the service. The specific details of the pricing model will be defined after contacting a certain number of possible parties, interested in these services, and will be revised according to their acceptance and usage. For instance, as often happens in "freemium" on-line services, limitations can include maximum number of montly requests, response time, portion of data that can be retrieved, or type of usage licensed.	Content holders (Public/private bodies) willing to publish content in Europeana
Multilingualism support	Dedicated personal assistance for multilingual databases	Content holders (Public/private bodies)
Training	Training programs on a wide range of topics around cultural heritage and digital heritage management	Public/private bodies dealing with cultural heritage heritage
Exhibitions organisation	Organisation of exhibitions around cultural heritage: from the idea to the exhibition implementation	Public/private bodies
Cultural events organisation	Organisation of all kind of events around cultural heritage (contests, seminars, congresses, etc.)	Public/private bodies hosting heritage events
Animation or non-animation Promos and Graphic Design	Design and production of promotional videos and print materials for the cultural heritage and educational sectors	Public/private bodies dealing with cultural heritage and/or education

Content-based services Eg Storytelling App, Virtual Exhibition etc	Provision of images or other content and content contextualization for its commercial use	Creative industry (ex. Gaming and publishing sector), museums.

A detailed services portfolio with a pricing policy will be developed by IDEA members.

Other income sources include:

Source of income	Description
Members' dues	In the range of 100 euro members + 400 euro integrative contribution for non- physical members (to be discussed during the first General Assembly in September 2016)
Extraordinary members" dues	To cover the costs of special initiatives planned and promoted by the association, extraordinary fees may be required for self-financing only to members interested in them.
Periodic Crowdfunding Campaign / Donations	Sponsorship and other in-kind donations
Public funding	Where possible, IDEA partners will develop proposals for public funding at local, regional, national and European level.

As a complementary income source linked to the association website, it will be possible to consider offering **advertising spaces** to promote commercial brands, services and products.

4.4   MEMBERSHIP POLICIES AND DUES

Membership policies are developed in the article 6 of the Statute. The association allows membership to both natural and legal persons, public or private bodies, companies and associations. Regarding the acceptance or rejection of applications for registration to the association, the executive council decides, by a majority vote and in a non-debatable way.

Ordinary members are required to pay to the association, from the moment they join, annual dues by the amount to be established annually by the steering committee. The dues must be paid when joining and no later than 31 January of each year.

Members have the right to freely participate in the activities of the association. To cover the costs of special initiatives planned and promoted by the association, extraordinary fees may be required for self-financing only to members interested in them.

Membership status is lost due to the loss of the necessary requirements, due to resignation

or delayed payment of dues. The exclusion is decided by the steering committee. The excluded member may appeal to the general assembly.

A member may at any time withdraw from the association, with immediate effect, by written notification addressed to the executive council. The resigning member shall not be entitled to a refund of contributions paid or to a rebate of the dues related to the current year.

The association may use the information received from members only for social purposes, and make them public only with the consent of those concerned.

The membership due to join IDEA and the integrative contribution requested to non-physical members represent for the association a start-up base to cover the raw initial costs sustained to establish the association and to cover the 2016 ordinary costs. From the point of view of the member, the membership due allows to be part of the network, while specific services will be quoted on request and basing on the actual needs of the member.

The membership dues for 2016 is 100 plus a 400 euro integrative contribution for the institutions only (to be discussed during the first General Assembly planned in September 2016).

4.4.1 Governance Model

As stated in the article 9 of the Statute of IDEA (see Annex I), the organs of the association are the general assembly, the steering committee and the executive council.

The ordinary general assembly of the members, convened by the executive council not less than 20 days ahead the date fixed for the assembly, will meet in a location to be specified in the convening notice, during the first semester of each year, to deliberate on the financial statements, on the balance sheet and on all other general topics integrated on the agenda for the initiative of the executive council, of the steering committee or at the request of at least a quarter of the members.

The date, place and agenda of the assembly are announced to members by the executive council with the means that the steering committee deems appropriate.

All members in good standing with the payment of membership dues are entitled to attend the assemblies, with the right to vote. Each member may represent one or more other members provided with a regular written proxy.

For the legal constitution of the assembly and the validity of its deliberations is required the participation of at least 50 per cent of its members; not reaching this amount, the assembly is postponed to no less than two hours and not more than thirty days from the first call; in the second convening the assembly shall be valid whatever the number of members present or represented; the date of this session can be fixed in the notice convening the first one.

The assembly may decide by a majority of votes of the members present or represented by regular written proxy to another member.

The assembly, at the beginning of each session, elects through the participating members, the president of the assembly, the secretary and three tellers.

The secretary of the assembly shall prepare minutes of the deliberations. The minutes shall be signed by the president of the assembly, the secretary and the tellers.

Extraordinary general assemblies may be convened by the executive council, or for demand of not less than five members of the steering committee or one tenth of the members.

The members, in general ordinary or extraordinary assembly, may amend this statute.

The steering committee is appointed by the assembly and is formed by the number of components that will be determined by the assembly itself.

The steering committee is appointed for five years, and its members may be reappointed.

In the event of death or resignation of the steering committee members before the expiry of the mandate, the steering committee will substitute them for co-optation. The steering committee members so elected shall hold office until the next assembly. If for any reason the number of steering committee members is reduced to two, the entire steering committee is deemed to have lapsed and must be renewed. The position of steering committee member is unpaid.

The steering committee shall meet whenever necessary, even by teleconference or by e-mail, on the initiative of the executive council or at least a quarter of the steering committee members.

The deliberations of the steering committee shall be taken by a majority of votes of the members present. In case of equality of votes, prevails the president's vote.

The steering committee is invested with all powers to decide on the actions to be taken and on the criteria for the achievement and implementation of the goals of the association and its ordinary and extraordinary direction and administration; establishes guidelines for the implementation of the statuary tasks, establish the procedures and responsibilities for implementing and monitoring the performance itself; decides on investment capital; determines the amount of the annual member dues; decide on the activities and initiatives of the association and on collaboration with third parties; approves the draft budget, cash flow statement and balance sheet to be submitted to the general assembly; establishes the provision of services to members and third parties and the related rules and procedures.

The steering committee shall appoint from among its members the president of the association, the vice-president acting as secretary-general, the treasurer, and possible two councilors with specific roles. They constitute the executive council of the association.

The executive council shall hold office for the entire duration of the steering committee.

The executive council shall meet whenever necessary, even by teleconference or by e-mail, on the initiative of the president or vice-president.

The executive council works for the achievement and implementation of the objectives of the association and operates for the ordinary and extraordinary direction and administration;

shall appoint and dismiss managers, officers and employees and shall issue any measure regarding the staff.

The deliberations of the executive council shall be taken by majority vote of the members present. In case of equality of votes, prevails the president's vote.

4.4.2 SWOT analysis

As per EAGLE (see 3.4), it is possible to outline in a SWOT matrix the main key factors seen as important for IDEA.

The SWOT matrix of IDEA at this stage can be drafted as follows:

STRENGHTS

Commitment of the former EAGLE members;

Wide range of expertise and know-how in the field of CH;

Geographical Spread;

Brand reputation

WEAKNESSES:

Lack of financial resources at the beginning;

Lack of deep analysys of the competitor scenario

OPPORTUNITIES

Kickstarting new H2020 projects;

Enlarging the network with new skills;

Most Epigraphic Collections have not been

THREATS

Internal and external competition;

Taking too long in gaining concrete results;

Members fees alone cannot grant financial support;

Figure 8 – IDEA SWOT analysis

4.5 BRANDING IDEA'S PORTFOLIO OF TOOLS AND SERVICES

Branding strategy for IDEA includes the following areas:

4.5.1 Website and dissemination materials

A fully working and appealing website as well as dissemination material are essential to allow members disseminate about IDEA and this is one of the most urgent tasks that IDEA is planning for the second quarter of 2016

The website about IDEA will serve to advertise the association and its activities and services. A box will allow visitors to insert their email address to join a mailing list to stay in touch with IDEA. In a more advanced stage, the website will embed a virtual gallery with promotional aim, which gives access to a selection of images from the IDEA members.

4.5.2 Use of digitalmeetsculture.net as official media partner of IDEA's

The experience of EAGLE demonstrates that using this e-zine to make promotion is a successful visit-booster for the project's website. We plan to continue this winning strategy by producing and advertising posts and news about IDEA whenever possible.

A button redirecting to IDEA"s website will be added on digitalmeetsculture.net.

Any post published on digitalmeetsculture.net is rebounded via Facebook and Twitter, the IDEA members are invited to share, like and tweet the news items about IDEA. Social Networks

There is an agreement in EAGLE basing on which the followers of EAGLE on Facebook and Twitter will be migrated towards IDEA. The account of IDEA will be created in the first half of 2016 and kept lively and populated.

4.5.3 e-Newsletters

Both the contacts added via the website and existing contacts belonging to the Members will be used to create a database of email addresses, in order to send periodical newsletters and press releases.

4.5.4 Travels and events

Relying on the vast and international network of contacts and projects of the Members, IDEA will be advertised in any possible occasion (conferences, fairs, workshops, projects" meetings etc.). In particular, the events of the EAGLE project represent golden occasions to meet the two main target audience for IDEA: Cultural Institutions and Creative Industry. IDEA as such will apply to become Affiliate Member of EAGLE.

4.5.5 Dissemination tools

A basic version of the IDEA's website will be published by the end of May. The website will include general information about the mission of IDEA, a blog with latest news, a section collecting upcoming events of interest, contacts.

Further sections to be added shortly are:

- Service overview
- A gallery of images, representing the richness of EAGLE's heritage
- A section for new members to apply

A promotional flyer will be also designed.

5 CONCLUSION

This deliverable represents the conclusion of the EAGLE experience. It is a team work of the whole consortium and it was widely discussed during the final plenary of the project in Bari (September 2015) and then in Rome (27 January 2016).

The deliverable presents the results of the project in terms of knowledge acquired and outcomes achieved, and offers an overview of the future plans of IDEA, the association, strongly wanted by all the partners, which will keep the group together in the long run to continue the work started with the project.

We **reached the final goal of the project**, that is to make accessible to the public – not only to scholars – a huge amount of texts and images with related metadata pertaining to ancient Greek and Latin inscriptions.

We would like instead to make some theoretical observations and share some thoughts on the significance of the reasons that lay behind what we can call a successful case.

In fact, EAGLE is not only a project that is careful in spending money and sending deliverables and reports, ready to pass any review: EAGLE was born to be much more than this.

The possibility of **free online access to all the Greek and Latin inscriptions of** the ancient world has been a real need of the academic community for a long time. Our aim was to reach this goal not with the creation of a new, single database, but with the aggregation of the digital archives of different institutions around a common project and a common idea of what an inscription is and how to read it; this idea was born after years of **preliminary discussions** and agreements that preceded and fostered the European project.

Knowing clearly the need that we wanted to meet, and the way in which we wanted to do it, has surely helped us to focus our energies on the project's main goals: the harmonization of very different materials and the creation of a **new portal** that could make them accessible through a search form specifically designed for inscriptions.

We can say that – as you will see – both goals have been achieved, even if corrections and improvements are still possible and necessary.

However, we don't think that this is the real indicator of the success of the project.

In our opinion, what actually shows that **EAGLE is meeting a real need**, is that our **modus operandi** is becoming **an international standard**: a larger and larger number of projects are using the controlled vocabularies that are one of the most interesting and immediately re-usable products of the harmonization job that EAGLE has done, are adopting an EAGLE compatible metadata model, and are sharing their content through the same system.

This scenario was already clear during the first international EAGLE conference, which was held in Paris in autumn 2014, and it is now confirmed by the papers and posters selected to be presented at EAGLE2016 conference, and by the huge dissemination and networking activity of the project, which has widely enlarged the EAGLE consortium.

Among the new partners – too many to be listed here – we would like to mention at least two examples that are – for different reasons – particularly important: the Inscriptions of Greek Cyrenaica and the EpiNet project, which is currently digitising the tituli picti on the Roman amphoras from the Monte Testaccio in Rome. In the first case, one can clearly see the importance of a project dealing with inscriptions from a region corresponding to present-day Lybia: thanks to this digital archive, they will not only be better known, but also virtually preserved and protected against war damages and illegal commerce. In the second case, EpiNet is an important step towards a digital archive for inscribed instrumentum, a type of inscription that is fundamental to our knowledge of the ancient economy, but that is still lacking a policy of aggregation and harmonization of the existing digital resources.

This role as **project of reference,** of course, gives **EAGLE a great responsibility**, not only for the present, but also for the future, since now we must not only continue to meet the need for which the project was born, but also to show the direction in which we want to continue.

In this sense, and not by chance, we think, **Europeana has also shown an evolution in its policy**: as has been recently stated during the final conference of the Athena Plus project, in the future Europeana will pay much more attention to the quality over the quantity of its digital items.

This decision may have been made possible by the influence of projects like EAGLE, that are particularly careful about the **curation of content and its usability in research activity**.

The same observation can be made with respect to another aspect of the project. One of the main goals of the EAGLE project is to make inscriptions accessible not only to scholars, but also to a broader public, made up of students, teachers, tourists, and curious and interested people.

To reach this audience it's necessary to overcome the barriers represented by ancient languages and sometime ancient alphabets, epigraphic formulas and abbreviations, but also by the characteristics of traditional academic language and means of communication, using the huge potential of images, social media, and storytelling techniques. The results of this effort are particularly interesting: the realization of a **mobile application** using an image-based recognition system, the creation of the **EAGLE MediaWiki platform** to collect and organize thousands of translations in modern languages of epigraphic texts of varying complexity, a **new storytelling application** to illustrate the narrative content of many inscriptions, not to mention a **virtual exhibition and a promotional video.**

All this was included in the proposal submitted to the European Commission, but – once again – the fulfilment of promises is not the only indicator of the success of our project. In this case too, we think that much more significant is what went beyond the promises**: the unexpected, but no less interesting, developements.**

The possibility to have in a single online archive most of the existing translations of Greek and Latin inscriptions has raised a whole series of theoretical reflections about the often underestimated problems and difficulties that a translator has to face. On this subject, scientific contributions and practical solutions have been proposed, but new questions still must be answered. And this shows that even a task born as a dissemination activity can successfully interact, if seriously undertaken, with research activity.

In the same way, the enormous work of enriching the content of the project with images has led to an effort to to clarify the **different laws that in different countries of the European Union**

govern the use of photographs of cultural heritage for both educational and commercial purposes.

In this framework, the EAGLE Consortium has signed the assessment presented by Europeana Fundation to the European Parlament to ask for a revision and an **update of the regulations concerning the re-use of digital images on the web, especially within projects related to the digitalization of cultural heritage**. We also hope that in the future this assessment will be accepted by all the institutions that don't yet recognize the civic value of scientific projects like ours.

In this field, too, the effort originally intended to enlarge the accessibility of the epigraphic material through the EAGLE portal is having – and will have in the future – interesting repercussions for scholars.

The importance of non textual elements for the correct and complete understanding of epigraphic messages has been recognized for some time. This implies the need not only to read, but also to look at the inscription. Not by chance, the theme chosen for the last International Conference of Greek and Latin Epigraphy, held in Berlin in 2012, was Öffentlichkeit – Monument – Text, and the same approach can be found in some of the papers that will be presented in the next days, dealing with the relationship between form and content in epigraphic studies.

You can imagine how many possibilities in the **field of palaeography and writing technique** can be opened by the ability to search **for "similar images" through the EAGLE portal**. Once again, a project can be recognized as successful if it not only meets a present need, but also shows new directions for future research, that will benefit from a constant and closer relationship between texts and images.

All these results would have never been possible without the help of all the people who, in different ways and with different roles, are involved in the project. People first of all curious and keen to ask questions, ready to listen and observe, who don't use problems as a pretext not to do things, but rather try to solve them. People, above all, able to connect ideas, places, projects, and other people in the awareness that every success is not a point of arrival, but part of a continuing journey.

We can learn something from this experience, not only for our present satisfaction but also as a suggestion for the future: even in the field of digital epigraphy we have to move, I think, towards a wider connection and interoperability of projects, allowing us not only to progressly fill the still existing gaps, but also to better use our human and financial resources.

In the XIXth century, the Corpus Inscriptionum Latinarum would have never been completed without the huge net of collaborators, correspondants and scholars from the whole of Europe with whom Theodor Mommsen intensively exchanged letters and documents. In the same way, I think, the new frontier of epigraphy is the broadening of studies and research made more and more open, collaborative and constantly updated thanks to a clever use of technology and digital resources.

To speak about the future of EAGLE, therefore, there is no need to imagine complex scenarios for the coming years. We can just ask ourselves::

  a) What was our original goal and how much of it has been achieved

b) What has worked well and is to be kept, and what, according to this experience, should be improved

c) What has been set aside or not originally included, but should be planned for the future

"Old fashioned" EAGLE was born as a federation of databases with the goal of "recording all Greek and Latin inscriptions older than the VIIth century AD, according to the best existing edition, possibly checked and improved, along with some fundamental data and images". We can say that this goal has been adopted by the "new version" EAGLE, too. But, due to a difficult coordination between Greek and Latin epigraphers most attention has actually been paid to Latin inscriptions.

We have known since the beginning that the complete recording of all known inscriptions was practically impossible. Nevertheless, we can probably state that in a short time the number of inscriptions searchable through the EAGLE portal will reach about 550.000, thanks to the enlargement of the consortium and to the enormous work of harmonization and disambiguation of content, and above all thanks to the inclusion of the epigraphic texts put at our disposal by Manfred Clauss and his database.

Our tasks for tomorrow, concerning what to keep, and what to change according to our past experience. In our opinion, and – as it seems – according to the European Commission too, **the general structure of the project, what we can call its philosophy, has been successfully tested – as the facts testify – and should, therefore, be mantained. The philosophy is based on two fundamental principles.**

The first is common to every project that aims to be a scientific research project, and it's the awareness that we do not have definitive solutions, but just hypotheses, which must always be checked because every attempt involves the possibility of errors that can and must be corrected. The large number of changes and improvements made during the project are not a proof of weakness, but a sign of its strength.

The second point is the clear need for as wide a collaboration as possible, to ensure not only a large quantity of data, but above all a high quality of content, checked by experts in different geographic regions and thematic fields. This aspect has been particularly curated in these last years, so that the number of institutions and single content providers has been greatly increased. In this way, and thanks to great technical work including the fundamental creation of controlled vocabularies, the EAGLE portal now gives access to many different databases, originally independent and with different characteristics and purposes..

EAGLE looks different from other similar projects because, since the beginning, it has paid much attention not only to the quality of information, but also to the combination of textual and non-textual data, according to the current definition of an inscription as an inscribed monument.

Moreover, in recent years, we have seen a huge increase in the visual documentation available online, and now EAGLE includes about 250.000 digital photos of inscriptions. This is another aspect that should be mantained, and – possibly- even strenghened. In fact, thanks to projects like ours, the problems related to the legal treatment of images of cultural heritage seem to be at the moment under discussion, both nationally and internationally.

All this is about the future: not a vague and undefined future, but a very positive future, modelled according to our past and present plans, constantly checked and renewed.

EAGLE consortium is very much satisfied with the experience of the last 3 years, which had been extremely interesting, challenging, and full of surprises and enthusiasm. EAGLE paved the way to IDEA and that is another big adventure the partners are willing to experience.

EAGLE will be sustained for the foreseeable future.

The consortium members, thorough IDEA will continue working on the portal's interactivity features, by highlighting content and sending out the newsletters.

The network actively pursues the addition of new partners, by keeping close communications with the different working groups and networks and attending stakeholder events.

These include Horizon 2020 network meetings, as well as meetings with the Europeana network and the annual Digital Heritage conference.

Figure 9 – Group portrait at the very beginning of the project (April 2013)

ANNEX I

CHARTER OF THE INTERNATIONAL DIGITAL EPIGRAPHY ASSOCIATION

"*International Digital Epigraphy Association," abbreviated "IDEA"*

Article 1 – An association called the "International Digital Epigraphy Association," abbreviated "IDEA," is established.

Art. 2 – The association has its headquarters in Peccioli (in the province of Pisa), Via Boccioni number two, and can establish additional offices in other locations.

Art. 3 – The association has a democratic structure, is politically independent, and is established for an unlimited period of time.

Art. 4 – The association is not for profit. The association's assets are made up of goods and real estate, donations, distributions and bequests, and possible reserve funds from budget surplus. The association's revenue is made up of membership fees, possible extra contributions made by members, public and private grants and donations, profits derived from services rendered, income from commercial and productive activities, and other sources compatible with the association's goals.

The fiscal year begins on January 1 and ends on December 31. Direct or indirect distribution of revenue, surplus, funds, reserves, or capital during the life of the association is prohibited. In the case of its dissolution, any remaining funds must be allocated to associations or institutions with goals similar to those of the association.

Art. 5 – The goal of the association is the promotion of the use of advanced methodologies in the research, study, enhancement, and publication of "written monuments," beginning with those of antiquity, in order to increase knowledge of them at multiple levels of expertise, from that of specialists to that of the occasional tourist.

In order to reach its statutory goals, the association promotes, organizes, and manages conventions, conferences, exhibits (including virtual exhibits), prizes, and training courses (including online courses); it conducts editorial activities; it promotes and supports the maintenance and efficiency of the portal created by the European project EAGLE (European network of Ancient Greek and Latin Epigraphy); it participates in and promotes the participation of its members in projects and initiatives, including in collaboration with third parties; it promotes initiatives in the interest of its members; it performs and encourages studies and research; it collects data and news of interest to the activity of its members; it carries out consultations in favor of its members; it more generally carries out all activities useful for the achievement of the goals that the association proposes.

Art. 6 – Any natural or legal person, public or private institute or entity, society, business, or association may become a member of IDEA. The executive council decides whether to accept or reject a membership request, and decisions are final.

Members are required to pay an annual membership fee to the association from the time they join. The fee will be fixed each year by the directorial committee.

The membership fee and additional contribution cannot be raised by more than 10% in a year.

For the year 2016, the membership fee is 100 euro and the additional contribution for members who are not natural persons is 400 euro.

Fees must be paid at the time of enrollment and by January 31 each year following.

Members may participate free of charge in the activities of the association. To cover the costs of particular initiatives organized and promoted by the association, additional self-financing fees may be asked of only the members involved in the initiatives, with no obligation to members who are not involved.

All members who join the association in the first twelve months after its founding will be honored with the title of founding member. This designation implies no difference with respect to other members in terms of rights and duties to the association.

Membership is lost if the member falls short of the necessary requirements, resigns, or fails to pay membership fees for sixth months after the first request for payment. Expulsion is deliberated by the directorial committee. The expelled member can appeal to the general assembly.

A member can withdraw from the association at any time with immediate effect by writing to the executive council. The resigning member is not entitled to a refund of membership fees paid or to the cancellation of those owed for the year in progress.

Members must commit to observe the present charter, to collaborate with the association in working towards the realization of its institutional goals, and to provide news of their own activities when requested by the association's representatives, with exceptions, however, for the essential need for privacy of each member. The association can use news from their members only for social purposes, and make such information public only with the consent of the interested parties.

Art. 7 – Any natural or legal person, public or private institute or entity, society, business, or association that, even without being a member, contributes economically to IDEA or, through actions, has given or can give support to the achievement of the association's goals is a supporter of IDEA.

Supporters may benefit from the services offered by the association, with the conditions and in the manner decided by the directorial committee.

Supporters may participate in assemblies as observers. They are entitled to speak but not to vote and cannot be elected to any position in the association.

Art. 8 – The executive council may propose nominations of honorary members for the approval of the directorial committee. Any natural or legal person, public or private institute or entity, society, business, or association, even those who are not members, may be nominated for honorary membership by virtue of their particular contribution to the achievement of the association's goals.

Honorary members may participate in assemblies as observers. They are entitled to speak but not to vote and cannot be elected to any position in the association.

Art. 9 – The agencies of the association are the general assembly, the directorial committee, and the executive council.

The general assembly of members, summoned by the executive council no fewer than 20 days prior to the date fixed for the meeting, meets in a location to be announced in the summons, in the first half of every year, to discuss the budget, the balance sheet, and any other general topics designated as orders of business by the executive council or directorial committee or requested by at least one quarter of members.

The date, place, and orders of business of the assembly are communicated to members by the executive council through the means that the directorial committee deems appropriate.

All members in good standing with regard to the payment of membership fees are entitled to speak and vote at the assembly. Any member may represent one or more other members provided that they have written authorization.

For the legal establishment of the assembly and for the validity of its decisions, at least 50 percent of members must participate. If this number cannot be reached, the assembly is postponed to a time that is no less than two hours and no more than thirty days from the first summons. At the second summons, the assembly is valid no matter the number of members present and represented. The date of this session may be fixed in the same announcement as the first.

The assembly may also be held by teleconference with the same procedures described above as long as the free participation of all members is guaranteed.

The assembly issues decisions with a majority of the votes of the members present and those represented by proxy.

The assembly, at the beginning of each session, elects from among the members present the president of the assembly, the secretary of the assembly, and three scrutineers.

The secretary of the assembly writes minutes for the meeting. The minutes must be signed by the president of the assembly, the secretary, and the scrutineers.

Extraordinary assemblies can be called by the executive council, or by the request of no fewer than five members of the directorial committee or one tenth of members of the association.

Members gathered in either an ordinary or extraordinary assembly can modify the present charter.

The directorial committee is nominated by the assembly and is made up of a number of members to be determined by the same assembly.

The directorial committee serves for five years and its members can be reelected for a maximum of two terms.

In the case of the death or resignation of a member of the directorial committee before the end of his or her term, the directorial committee will appoint a substitute by cooptation. Directorial committee members elected in this way remain on the committee until the next assembly. If for any reason the number of committee members is reduced to two, the entire committee is considered lost and must be renewed. The appointment of a new member of the directorial committee is gratuitous.

The directorial committee meets as often as is necessary, including by teleconference or email, by the initiative of the executive council or by at least one quarter of the members of the directorial committee.

Decisions are made by the directorial committee with a majority of the votes of members present. In the case of a tie, the president's vote prevails.

The directorial committee has the power to decide on initiatives to pursue and on criteria to follow for the achievement of the goals of the association and for its ordinary and extraordinary direction and administration. Once directives for the realization of statutory tasks have been agreed upon, the committee establishes procedures and responsibilities for carrying them out and oversees their execution; it decides how to invest the association's assets; it sets the amount of the annual membership fees; it selects the association's activities, initiatives, and collaborations with third parties; it approves plans for a tentative budget, expense sheet, and balance sheet to be presented to the general assembly; it decides upon and governs services rendered to members and third parties.

The directorial committee nominates from among its members the president of the association, the vice-president, the director charged with the responsibilities of general secretary and treasurer, and up to three council members with specific responsibilities. These persons make up the executive council.

The executive council remains in office for the duration of the term of the directorial committee.

The executive council meets as often as necessary, including by teleconference or email, when summoned by the president or vice-president.

The executive council works for the attainment and realization of the association's goals and performs ordinary and extraordinary directorial and administrative tasks. It nominates and suspends directors, officials, and employees and issues all provisions regarding personnel.

The decisions of the executive council are decided by a majority vote of the members present. In the case of a tie, the president's vote prevails.

Art. 10 – The president is the representative of the association. The president, the vice-president, and the director can, separately, sign any administrative acts regarding the association, open and close bank accounts, and collect and carry out payments.

Art. 11 – Any conflicts arising between members relative to the association and its agencies will be discussed by the directorial committee, which will act according to a majority decision without procedural formalities, except for the right to appeal to any other authority.

Art. 12 – The dissolution of the association is decided by an extraordinary general assembly, which will nominate one or more liquidators and determine their powers.

Art. 13 – All that is not contained in the present charter is governed by provisions of law.

Signed

The parties