

# DELIVERABLE

Project Acronym: EAGLE

Grant Agreement number: 325122

Project Title: Europeana network of Ancient Greek and Latin Epigraphy

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## Validation Report

### D5.6.2

version: N° 2.0

Revision: final

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Project co-funded by the European Commission within the ICT Policy Support Programme		
Dissemination Level		
P	Public	<input checked="" type="checkbox"/> x
C	Confidential, only for members of the consortium and the Commission Services	

## Revision History

Revision	Date	Author	Organisation	Description
0.1	15/06/15	Mambrini	DAI	Draft
0.2	26/06/15	Mambrini	DAI	First complete draft
0.2 RS	07/07/15	Santucci	Uniroma1	Review
0.3	07/07/15	Mambrini	DAI	Suggestions of the reviewer integrated
1.0	09/07/15	Prandoni	Promoter	Final check
1.1	15/03/16	Mambrini	DAI	Second release prepared
2.0	13/04/16	Prandoni	Promoter	Final check

### Statement of originality:

This deliverable contains original unpublished work except where clearly indicated otherwise.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

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## LIST OF ABBREVIATIONS

- ISE EAGLE Inscription Search Engine  
FMA EAGLE Flagship Mobile Application  
FSA EAGLE Flagship Storytelling Application

For D5.1, D5.2, D5.3.1, D5.4.1, D5.5 see References



## EXECUTIVE SUMMARY

This document discusses the results of the two rounds of evaluation of the three user-dedicated services that have been developed in the context of the EAGLE project, Work Package 5.

Section 1 summarizes briefly the timeline of the development and evaluation cycle, as well as the methodology used for testing the applications and collecting feedback.

The three following sections are all dedicated to illustrate the outcome of the testing procedures. Sections 2, 3 and 4 deal with the Inscription Search Engine, the Flagship Mobile and Storytelling App respectively; they are organized according to the same general schema. For each application, we offer a brief overview with quantitative data on the amount of feedback collected (sections 2.1, 3.1 and 4.1). The results obtained are presented and discussed in Sections 2.2, 3.2, and 4.2. In addition to that, for every application some specific methods of testing, e.g. usability tests for the second round of evaluation Storytelling App (Section 4.4.2), were also applied; their results are discussed in full in each section.

For all the applications we executed a series of test cases, which were supplemented with feedback elicited through other channels. After reviewing these data, the evaluation team compiled a list of open issues that the developers will address for the next release cycle.

In the Appendix (Section 6), readers will find a summary of the most recent versions of the test cases that were executed by the testers in both rounds; all the discussions in this deliverable are based on those test cases.

## 1 INTRODUCTION

For the ease of the readers, we offer in this section a short summary of the concepts and goals of the validation phase. Readers that are interested in the details, the actors involved and other methodological aspects of the validation process adopted for the EAGLE end-user-dedicated services should refer to D5.5.

### 1.1 DEVELOPMENT AND VALIDATION CYCLE

The validation phase is articulated in two **cycles**, which follow the corresponding release phases of the three services. The present deliverable discusses the result of the first cycle, while at the same time we lay the foundation for the second stage. The second cycle will start after v.2.0 of FMA and FSA and the upgrade of the ISE are released on month 30 of the project (September 2015).

Each cycle includes the following steps:

- **Planning stage:** the list of the testers is established and the test case form is distributed to them. The grid of the test cases is discussed with the testers and, in case, modified.
- **Test stage:** the test cases are executed by the testers and collected by the leader of the evaluation procedure.
- **Final evaluation:** the leaders and developers of the applications, together with the project management, discuss the outcome of the test; in case of ambiguous outcome, a new round of tests is initiated.

### 1.2 VALIDATION AND TESTING

#### 1.2.1 Test cases

The main goal of the process of functional validation is to verify that the EAGLE software performs what is intended to do, and therefore satisfies the requirements defined by the partners. To this aim, we designed a series of performable routines called **test cases** [D5.5: pp. 12-5]. These test cases are based on real-life **test scenarios**, which include realistic tasks (such as retrieving inscriptions that display certain information) that users might want to perform, or task they might want to solve. Given that all the three applications make use of search functionalities and require some interaction between the registered users and the EAGLE content, we have focused our attention especially on queries and management of personal accounts (login, logout, account registration, saving and editing preferred content). The use cases collected and discussed in D5.1 (pp. 18-27) have also suggested many features of the test scenarios.

Test cases must be formalized in all their aspects, including input, steps, expected outcome and condition of success. In the grids that our testers have used, each test case for the three applications includes the following mandatory descriptors:

- **ID:** a string that uniquely identify each test case, created according to this structure: a first letter identifying the application (P = portal; M = mobile, S = storytelling), T (marking the test case), a two-field numeric identifier providing the sequence of parents and children test cases (1.0, 1.1, 2.0 etc.).

- **Parent:** the parent a variation of a test case originates from.
- **Requirements:** ID of the functional requirement(s) where the functionality that is being tested is mandated and described in full (as defined in D5.1).
- **Name:** a short description of the main function that is tested or the main goal that the test wants to achieve.
- **Description and steps:** this field lists the steps that the testers are required to execute in order to perform the test.
- **Expected outcome:** the final status that the system is expected to reach (landing page on a browser, displayed results, etc.) once the steps are executed.
- **Outcome:** the actual outcome observed by the tester. Only the following values are allowed for the field:
  - **OK:** the outcome observed corresponds to the expected outcome. The test is considered valid.
  - **Warning:** the test is executed with the expected outcome and the test is considered valid, but either some improvements can be suggested in the execution of the steps or some new testing (with different steps and/or values) is suggested; testers must explain the warning in the **note** field (see next point).
  - **Failed:** the expected outcome cannot be obtained; the test fails or is interrupted in some of the steps. Testers must leave a note recording the step where the process is interrupted and/or the outcome that they have observed.
- **Notes:** the testers have the possibility to leave a detailed text note recording any observation they might have on the tests; in case the status "Warning" or "Failed" is selected, testers are expected to use the field to give as detailed a description as possible of the problems encountered.

D5.5 included a preliminary template for the test case grids of the three application that was based on the functional requirements of D5.1. The grid for each application was discussed with the testers and adapted to reflect the actual development ISE, FMA and FSA. The changes to the original grids are discussed in the relevant paragraphs of the three applications (sections 2.2.1, 3.2.1, 4.2.1). The last version of the test case grid, on which the report is based, is provided (in a slightly simplified version that omits some technical fields, like parents or requirements) in the Appendix.

The testers who executed the cases were chosen among the partners of the EAGLE project. In the first cycle, we preferred to focus on working with a relatively small number of testers, between 5 and 10 (see Krug 2005, p. 138), that could be assisted throughout the process and whose feedback could be collected in greater details throughout the entire cycle (including feedback on the validation technique itself). For each application we also made other channels available (in particular, online forms: see next section) that were addressed to partners and affiliated of the EAGLE consortium, so that all the interested audience could have a chance of providing suggestions or opinions about the services.



The time constraints imposed by the calendar of the development cycle (which for FSA concluded later than it was programmed in the beginning), or other technical issues (lack of an iOS version of the FSA) limited the number of testers that we could involve for the two flagship applications. However, we were able to reach our target of at least 5 testers for application. The number of testers that were involved, as well as the list of project partners and affiliated institutions whose members have been involved in the operations of the first cycle of evaluation is reported in sections 2.1, 3.1, 4.1

### 1.2.2 Feedback forms and other feedback channels

At the same time for ISE and FMA we have opened a second channel for collecting feedback from the users. A form has been circulated to the project partners and the other member with extant affiliation agreements with EAGLE. The forms are available in the reserved area of the EAGLE website. Users have the opportunity to submit their feedback by entering some free text in a text field. Unlimited latitude was intentionally left to the users, so that they could provide either further confirmation on the main functionalities of the applications, or experiment with data and conditions that were not formally included in the process of functional validation.

The combination of the test case reports and all the feedback that we could collect via the forms allowed us to compile a list of confirmed issues that the developers will have to address in the second phase of the development cycle.

While we decided not to prepare a form for the FSA, feedback on this application was collected as part of a different experiment that involved the content providers and aimed to promote objects of special interest in the EAGLE collection. Moreover, after the first round we decided to focus the testing of the FSA on some usability issues, in order to ensure that the Storytelling Access page on the EAGLE portal and each of the published stories were as intuitive to browse and understand as possible.

A supplementary channel that allowed users and testers to file bug reports and enhancement request was the issue tracker of the GitHub repositories dedicated to the apps. After the end of the first round, we decided to keep track of the open tickets and issues using special sub-repositories in the main EAGLE-BPN repository on GitHub. Although the code of the ISE, FMA and FSA is not hosted on those GitHub repositories at the moment, the bug tracker of the platform allowed us to handle the list of open issues transparently, while keeping track of the problems that had been fixed and those that needed further work; all the partners of the project have been invited to follow the development and to take part in the discussion that takes place for all issue. The status of the GitHub issue lists is discussed in detail in each section.

Finally, all the applications were constantly showcased to the general public attending the EAGLE international meetings; in particular, the final version of the three apps were presented in the fourth (Nicosia, March 2015), fifth (Bari, September 2015) and sixth international event (Rome, January 2016, coinciding with the second EAGLE international conference). During these presentations, we had several chances to receive input and encouragement from the audience.

## 2 THE INSCRIPTION SEARCH ENGINE

### 2.1 OVERVIEW OF THE FIRST ROUND

The first round of evaluation of the ISE was based both on the execution of the test cases and on the collection of feedback via the dedicated form mentioned in the Section 1.2.2 and discussed in greater detail in D5.5.

Seven testers from the partner institutions of the EAGLE project have performed the tests separately. Their results have been collected in test grids analogous to those included in the Appendix of D5.5. A summary of the results is discussed in detail in section 2.2.2

The feedback form for the ISE was open from November 2014 to the end of March 2015 and was diffused to all the project partners and members of the institutions that have affiliations agreement or a memorandum of understanding in place with the EAGLE project<sup>1</sup>. Via this channel users sent 47 reports on various issues, 33 of which were identified by their authors as bugs or problems, 14 as suggested new features. Based on the combination of both the test results and this feedback we compiled a list of open issues that were submitted to the board of the developers, the supervisors of the content aggregation, the leader of the validation taskforce, and the project management for discussion. The list is reported in section 2.2.3. The plan of actions to be undertaken in order to solve the issues is discussed in section **Errore. L'origine riferimento non è stata trovata..**

People from the following partner institutions or affiliated projects have submitted feedback during the first round of validation, either by executing the test cases or by sending comments and reports via the online form:

- University of Bari
  - University of Heidelberg
  - Oxford University
  - University of Alcalà
  - University of Salzburg
  - Deutsches Archäologisches Institut
  - The British School at Rome
  - The Cyprus Institute
  - University of Foggia
  - Duke Collaboratory for Classics Computing
  - E-pigramme
- 

<sup>1</sup> An updated list of these projects and institution can be consulted at: <http://www.eagle-network.eu/about/partners/>

- University of Bologna
- Attic Inscriptions Online

## 2.2 THE TESTS

### 2.2.1 Planning and execution of the test cases

The first round of evaluation was started as early as February 2015, so that the first results could be presented and discussed at the project general meeting held in Nicosia, Cyprus on March 10<sup>th</sup>. The grid that was initially distributed to the testers was the same as that included in the Appendix of D5.5.

This original list of test cases needed to be revised and updated in two points. As originally written, the test cases PT2.0, PT2.1, PT2.2 and PT3.0 were ambiguous. As the description of the required steps did not specify whether a user had to start from the "Basic" or the "Advanced Search" interface, the tests could both succeed (for the "Advanced Search") and fail (for the "Basic Search") at the same time. The ambiguous formulation had to be amended, so as to specify clearly what interface the functionality was to be tested on.

Also, the required steps for PT7.2 did not reproduce the intended behavior that the testers were supposed to validate. PT7.2 aimed to verify that, according to the functional requirements PSE16 and PSE19 (see D5.1), all the multiple instances of the same inscriptions in the detailed record view that is accessible from the result list are browsable and displayed in different panels; the designers of the tests wanted to verify the functionality with the help of the inscription with Trismegistos ID 202554, which was known to be reproduced in at least two different editions within the EAGLE collection. However, the query engine was originally designed so as to retrieve only the multiple instances that satisfy the original query constraints specified by the user. In the example given, since the value for "type of inscription" is set to "funerary" in one of the instances (provided by the British School of Rome) and "unidentified" by the other (EDH), only the British School sample was retrieved and made visible if the testers specified both constraint (the name "Narsis" in the text and "funerary" as typology) as they were asked to do. Therefore, the presence and behavior of the panels in the detailed view could not be tested.

Though unforeseen and not relevant for the purpose of validating the intended functionality, this outcome was extremely valuable in pointing our attention on the way multiple instances were handled. The question of whether we wanted to keep the treatment of multiple editions as it was or rather to allow users to see all the instances of a retrieved inscription (whether they satisfied the original query or not) in the detail view was submitted to discussion during the project meeting in Nicosia. The partners agreed to the latter option: all the available editions of the same inscription should be returned once that a user selects to access a single record from the result list, regardless of whether the other instances satisfy the original query or not.

As a consequence, PT7.2 was kept in the grid to test precisely the solution that has emerged from the discussion (i.e. if all the instances of the same inscription are accessible in the detail view even if some of them do not satisfy the query constraints); a new case (labeled PT7.2.1) was introduced to test the system's behavior in the simpler situation when all the instances satisfy all the query constraints simultaneously.

As for the account-management interface, requirement PSE01 (D5.1, p. 32) mandates that

every page of the EAGLE portal shall allow users to login and/or create an account. However, the page for Basic Search was build intentionally with a minimalistic design in mind: only one text field for research was provided for the user. This design clearly discourages the insertion of a login interface. In the general meeting partners have agreed to amend the requirement in this direction. The Basic Search marks an exception to the prescriptions of PSE01. The test related to login and account creation must therefore be limited to the "Advanced Search" page.

According to these conclusions, a version 1.1 of the test case of the test cases was produced and handed over to the testers to be run again.

The test cases included in v.1.1 of the grid, which was used by the testers to report their results, are reproduced in a slightly simplified version in Section 6.1 of the Appendix.

## 2.2.2 Results

The results discussed here refer to version 1.1 of the test cases (see previous section). Table 1 reports a synthetic overview of the test results.

Test Case	Tester 1	Tester 2	Tester 3	Tester 4	Tester 5	Tester 6	Tester 7
PT1.0	F	F	F	F	F	F	F
PT1.1	F	F	F	F	F	F	F
PT2.0	OK	W	OK	OK	OK	W	OK
PT2.1	OK	F	OK	OK	OK	OK	OK
PT2.2	OK						
PT3.0	OK						
PT4.0	W	W	W	W	OK	OK	OK
PT4.1	OK	W	OK	W	OK	OK	OK
PT4.2	OK	W	OK	W	OK	OK	OK
PT4.3	OK	OK	OK	W	OK	OK	OK
PT4.4	W	W	W	OK	OK	OK	OK
PT4.5	OK	OK	W	OK	OK	OK	OK
PT5.0	OK	W	F	W	OK	W	F
PT5.1	F	F	F	F	F	F	F
PT6.0	OK	OK	OK	F	OK	OK	OK
PT6.1	OK	OK	OK	W	OK	OK	OK
PT6.2	F	F	F	F	W	F	OK
PT7.0	OK	W	W	OK	OK	OK	OK
PT7.1	OK	OK	OK	W	OK	OK	OK
PT7.2	F	F	F	F	OK	F	F

PT7.2.1	OK						
PT7.3	OK						
PT8.0	OK						
PT9.0	F	F	F	F	F	F	F
PT9.1	F	F	F	F	F	F	F
PT10.0	OK	W	F	W	OK	W	OK
PT10.1	OK						
PT11.0	OK	OK	F	W	OK	W	OK
PT11.1	OK	F	F	F	F	F	F
PT12.0	OK	W	F	OK	F	OK	OK
PT13.0	OK						
PT13.1	OK						

Table 1: Test case results: overview. Results: OK = OK; W = Warning; F = Failed

As for the **login and account management** (PT 1.0-3.0), the tests indicates that the system is responding as it should, allowing users in possession of the right combinations of username and password to enter, while rejecting false or empty credentials; the logout functionality also works as expected. A dedicated interface to register a personal account, though, was not made available to the users, so that the testers were unable to complete PT1.0 and 1.1.

During the development phase, the short **list of information** provided for each matching record in the results was redefined several times. As a result, the list that was returned after a query during the evaluation round generated some puzzlement among the testers; this confusion originated several of the “Warning” statuses issued for PT4.0: while the test was mostly considered successful, as far as the retrieval of records went, the information provided for each matching object left room for discussion.

Tests provided also an occasion to have a feedback on the implementation of the EAGLE **controlled vocabulary** in several fields of the Advanced Search. A few testers issued “Warning” statuses at PT5.0 to voice dissatisfaction on the way values were displayed and organized; at the same time, some users who submitted feedback via the online form complained about the length of the lists of values taken from the controlled vocabulary and of their lack of organization.

The absence of a function to limit the queries to those inscriptions that have at least one **image** and at least one translation was clearly pointed out by testers in PT5.1. The issue was known in advance to the developers (D5.4, p. 6). Equally known was the unsolved issue of diacritics in textual queries. As a matter of fact, the tests confirm that the diacritics (both in Latin and Greek script) do not work as expected (PT6.0 and 6.2).

The problem of how to handle multiple instances of the same inscription in the detailed view of each record (PT7.2, PT7.2.1) was discussed in detail in section 2.2.1.

### 2.2.3 List of identified issues

The feedback form that partners could use to submit free text comments on the ISE confirmed some of the issues briefly discussed above and added some interesting points of detail. After reviewing the data coming from the two sources, the validation leaders, developers and the project management agreed on the list of open issues that is reported in table 2.

The issues listed in table 2 are defined by the following fields:

- **ID:** a unique identifier to help the developers keeping track of the bug
- **Description:** a short but detailed description of the issue
- **Status:** is set to one of the following values:
  - **Non confirmed:** the bug was reported but we were not able to replicate the conditions listed in the descriptions; more research is needed to identify the source of the problem;
  - **Confirmed:** the issue is confirmed as described in the report received; the problem will be dealt with in the subsequent release;
  - **Solved:** the issue is confirmed and the developers have already implemented a solution that is ready for new testing.
- **Notes:** further notes (e.g. new testing is recommended; requirements that describe the functionality which is reported as flawed; etcetera).

ID	Description	Status	Notes
ise1.0	No interface for account creation is accessible on the site	Solved	Awaiting new testing
ise2.0	The label “location” in the result list is ambiguous; it should be replaced with a clearer indication of the information contained in the field (“ancient find spot”)	Solved	
ise3.0	The controlled vocabularies used for the faceted search and in the dropdown list of advanced search do not reflect the latest version	Solved	Awaiting new testing
ise4.0	The alphabetic order of the values from the controlled vocabularies is case-sensitive; it should be made case-insensitive	Solved	
ise5.0	It is not possible to limit the search only to inscriptions that have an image and/or a translation	Solved	Awaiting new testing

ise6.0	In the record view, not all the instances of the same inscriptions are visible, but only those that match the initial query by the user	Solved	Awaiting new testing
ise7.0	Single items saved in the archive cannot be viewed: when clicking on "view" only a white page is returned	Solved	Awaiting new testing
ise8.0	Query results saved in the archive cannot be viewed: when clicking on "view" only a white page is returned	Solved	Awaiting new testing
ise9.0	Content entered by users in the free text fields of the advanced search is always deleted when users click on the same field again	Solved	Awaiting new testing
ise10.0	The field "Social status" in the advanced search is useless: no item in EAGLE includes this information	Solved	
ise11.0	It is not possible to use the chronological information in the advanced search	Solved	Awaiting new testing
ise12.0	It is not possible to move to first or last page of results	Solved	
ise13.0	It is not possible to request the translation of an item	Confirmed	
ise14.0	Search with diacritics doesn't work as expected	Confirmed	See PSE08

Table 2: ISE, list of open issues

## 2.3 ACTION PLAN

As planned in the methodology of the validation phase, the list of issues was discussed by a team composed of representatives of the validation task leaders (DAI), the developers of the content ingestion (CNR-ISTI) and the EAGLE portal (Gogate and Promoter), the WP2 leaders (UHEI), and the project management.

The team agreed on the timeline for the second release of the ISE, which will include the fixes for the issues listed in table 2 and the most important functionalities mandated in the "medium" requirements of D5.1, i.e. support for Greek keyboard in Basic and Advanced Search, export of a record, download the EpiDoc file of each item, search by image (see table 1 pp. 30-2). Release 2 will be completed for September and it will be presented to the public during the Sixth EAGLE International Event, to be held in Bari (Italy), on September 24<sup>th</sup> and 25<sup>th</sup> 2015.

As it can be seen from the previous section, several issues reported during the first cycle of evaluation have already been addressed. At the moment when this deliverable is being released, the developers of the ISE report 12 of the 14 issues as solved and awaiting new evaluation. Also, some of the “medium” requirements have already been implemented after the conclusion of the first evaluation cycle. These include:

- Support for Greek keyboard in Basic and Advanced Search (PSE09)
- Faceted search (PSE24); note that this functionality has already been positively tested (PT8.0)
- Export of a record (PSE15)

The second round of evaluation will begin as soon as the developers announce the release of the upgraded version of the ISE, and in any case right after the presentation to the public at the Sixth International Event at latest (end of September).

The grid of test cases to be disseminated for the second round of evaluation will be based on the “medium-priority” functions and those fixes on the issues emerged from the first round that have been marked as “awaiting new testing” in the note field of Table 2 above.

In order to keep track of the issues that will emerge in the different steps of the second round of evaluation, we have decided to create an *ad hoc* sub-repository in the EAGLE-BPN GitHub repository named “Inscription-Search-Engine”. Problems and bugs will be collected in the specific “Issue” section of the GitHub repository<sup>2</sup>; there it will also be possible to label (as bugs or suggestions), discuss, assign and prioritize them, as well as to close or dismiss them. From now on and for the whole duration of the second round, the open issues will be referred to by their track number in GitHub.

## 2.4 SECOND EVALUATION ROUND

### 2.4.1 Overview

As we remarked at the end of the first round (see Sec. 2.3), many improvements and new features were already available by the end of the second year of the project. Therefore, for the second round of evaluation we have decided to rely on a more agile workflow and to take advantage of the issue tracker on the GitHub repository to elicit and organize the feedback. As soon as new function or fixes were implemented, we encouraged the partners to file, update or close the issues on the bug tracker. Moreover, the developers and representatives of the content providers and partners of the project have had several occasions to confront about the current status of the ISE, during the project meeting, via email or conference call. This approach allowed us to obtain an in-depth evaluation of the system responses.

After the last plenary meeting of the project (Rome, 27 January 2016), we ran a new round

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<sup>2</sup> The URL of the repository is: <https://github.com/EAGLE-BPN/Inscription-Search-Engine>; the issue list can be consulted at: <https://github.com/EAGLE-BPN/Inscription-Search-Engine/issues>.

of test cases, using the updated grid that is reported in the Appendix, Section 6.1.2.

In the following sections we describe the results of this testing process, as well as the issues that are still open.

### 2.4.2 Test cases

As for the first round, five testers have performed the test cases that we prepared for the new functions implemented since March 2015 and for those that required supplementary testing after the first round.

In particular, we have focused our test cases on the following functionality:

- retrieval of all the instances of the same inscriptions, even if one of them does not satisfy all the constraints of the original query (2P1.0; see ise6.0 above);
- search with controlled vocabularies (2P2.0);
- limit search to inscriptions with images and/or translations (2P3.0);
- chronological search (2P4.0), with different constraints:
  - both *termini* (not before, and not after) specified (2P4.0)
  - only the lower chronological limit given (not after empty; 2P4.1)
  - BCE dates (2P4.2);
- access the available translation(s) of a queried inscription (2P5.0);
- create account, both with valid (2P6.0) and empty credentials (2P6.1);
- save (2P7.0) an item/list of results, and retrieve the saved record from the archive (2P7.1)
- image search (2P8.0).

A more detailed description of the test cases, with indication of the expected outcome, is found on the Appendix.

The results of the use case is reported in Table 3.

Test Case	Tester 1	Tester 2	Tester 3	Tester 4	Tester 5
2P1.0	OK	OK	OK	OK	OK
2P2.0	W	OK	OK	W	OK
2P3.0	OK	OK	OK	OK	OK
2P4.0	F	F	W	F	F
2P4.1	F	F	F	F	F
2P4.2	F	F	F	F	F
2P5.0	W	OK	W	F	OK
2P6.0	OK	OK	OK	OK	OK
2P6.1	OK	OK	OK	OK	OK

2P7.0	OK	W	OK	OK	W
2P7.1	OK	W	OK	OK	OK
2P8.0	OK	OK	OK	OK	OK

Table 3: Test case results (2<sup>nd</sup> round): overview. Results: OK = OK; W = Warning; F = Failed

#### 2.4.3 Other tested functions: open and closed issues

The agile testing of the research functions allowed us to get sufficient feedback on other functions; also, it allowed us isolate a series of other issues that are still open (and were therefore not tested with explicit test cases).

Image search enables users to upload an image file and perform a similarity search (comparable to the one performed by the FMA) on the EAGLE collection; this function works as expected, as the test case 2P8.0 have confirmed. Following the input by some users, this function has been further improved: the threshold of “similarity” of the image recognition algorithm has been increased, in order to increase the accuracy (issue #13 on GitHub<sup>3</sup>). Furthermore, it is now possible to trigger an image search from the query results: whenever users visualize an image of an inscription, they have the option to search for records that are visually similar.

Related content (as specified in requirement PSE17) is now accessible with a hyperlink at the bottom of the record page.

The support for translations have been improved. While before only one translation among the many that could be provided for each single text was returned, now all the translations in all the available languages are also visualized. Users are then remanded to the Wikimedia page to see the complete metadata on the available translations.

As some testers during the first round have complained that the terms in the controlled vocabularies were not in the right order and were in fact piled up in a confusing mix of languages, we had decided to test the search with controlled vocabularies again in the final round (2P2.0); the organization of the facets and search fields with controlled values have been improved. Users have now the opportunity to select the languages that they want for the terms (while, however, they are also warned that some terms may not be translated into every language that we support, so that the choice of a language may result in a loss of information). As we reported above (Section 2.2.3), issues of alphabetization and issues related to the version of the controlled vocabularies that was being used had also been fixed before the end of the first round.

Other improvements include the capability of filtering the search results for content provider, to list the stories published with the FSA that include an item from the record view, and to make any suggestion to improve the records or the functions of the ISE. The

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<sup>3</sup> <https://github.com/EAGLE-BPN/Inscription-Search-Engine/issues/13>

Trismegistos unique identifier is now a hyperlink that redirect the user to the corresponding page on the Trismegistos website.

Other aspects of the ISE are still in progress. In particular, we intend to provide URLs for each inscription. Those URLs will enable users to cite the objects in our collection and share the results of any query. Also, an online manual and tutorial page is under construction, while the link is already visible in the search pages. For the trickiest details, like the search syntax, which has a strong impact on the results of each user's query (see next paragraph), we are considering also a more accessible and visually prominent display for concrete examples of queries. For instance, a small pop-up frame containing concrete examples of the syntax, that can be opened by clicking on a small question-mark icon beside the search field, will be implemented and tested.

However, the most important adjustment that is currently in progress is the fine-tuning of the query syntax that is used to search the text of the inscriptions. Several changes have already been implemented. In particular:

- match of the queried string over substrings of the inscriptions (e.g. "consul" matching "consularis") is now the default behavior in Advanced Search, but not enabled in Basic Search; the users can enable the substring match by checking a specific option in the interface of Basic Search too.
- "AND" is now the default operator when a multiword expression is entered in the text field; thus, "parentibus suis" (with no quotes) will only match inscriptions where both terms are attested.
- In the searched expressions, the Boolean operators "AND" and "OR", as well as the double quotes ("") for full-string match and the dash (-) for exclusion, are supported. Thus, the string: *parentibus OR suis* will match inscriptions with either *parentibus* or *suis* in their text; "*parentibus suis*" (with quotes) only inscriptions attesting the exact string, with both words in that order.

The latter syntax has proved useful but not intuitive for novice users; these and other examples will have to be duly explained and showcased in the online tutorials for the search engine.

Finally, the search with and without diacritics is still under testing. Currently, the Greek diacritics signs (accents and breath) are supported as expected. Parentheses and other editorial signs for integration are being tested. At the moment, while a search for e.g. "filia" correctly returns both the inscriptions matching the exact string and those matching the abbreviated forms "f(ilia)", parentheses are not correctly escaped in the query; a string such as "f(ilia)" is separated into "f" and "(ilia)" and the two chunks are searched as separated substrings. As a consequence, many false positives are returned.

#### 2.4.4 Final evaluation and future actions

The test cases and the discussions that have taken place between developers and partners have allowed us to identify a series of issues that remain to be fixed. Some of them were discussed in the previous section; others, which have been highlighted in the execution of the test case, relate in particular to two aspects.

Two fields to perform a chronological search in the "Advanced Search" interface are now provided, but chronological constraints do not work as expected. Entering specific time

specifications both as upper and lower limit, BCE dates or even dates from time period that should not be covered by a database of Greco-roman materials (e.g. 1400 and 1600 CE) always result in an impossible high number of results, with many irrelevant records returned as matches; see test case 2P4.0, 4.1, and 4.2. The issue is labeled as #27 in the GitHub repository<sup>4</sup>.

The personal archive is the space where saved queries and records, as well as items saved using the FMA, are stored. In many cases, the retrieval of saved items works as expected; in others, however, users meet with unexpected results; especially, clicking on "view item" often result in a different object than the one that was originally saved being returned to the user. The issue is labeled #46 in the GitHub repository<sup>5</sup>.

The full list of the open issues (and proposed enhancement) is reported below in Table 4. The closed issues are accessible online in the GitHub repository of the ISE<sup>6</sup>.

Given the list of the enhancement and fixes that must be implemented, the developers of the ISE have agreed to continue their effort beyond the time limits of the EAGLE project.

ID	Description	Type	Status
1	The search with and without diacritics doesn't work as expected (see PSE08)	bug	open
2	the Greek keyboard does not support polytonic Greek	bug	open
4	missing option "loose/strict" for searching by date	enhancement	open
6	undated inscriptions in resultset when searching for dates	bug	open
12	previews for images	enhancement	open
14	encoding issues	bug	open
19	Links to contents	enhancement	open
27	Date search does not work	bug	open

<sup>4</sup> <https://github.com/EAGLE-BPN/Inscription-Search-Engine/issues/27>

<sup>5</sup> <https://github.com/EAGLE-BPN/Inscription-Search-Engine/issues/46>

<sup>6</sup> <https://github.com/EAGLE-BPN/Inscription-Search-Engine/issues?q=is%3Aissue+is%3Aclosed>

30	search layout	enhancement	open
32	ordering of results	enhancement	open
33	change facet language loses information	enhancement	open
34	view related inscription	bug	open
37	Generate a URL for each inscription	enhancement	open
42	An online help/tutorial for the options of the search engine	enhancement	open
43	Print/export the result list	enhancement	open
45	Optimize search interface for mobile phones	enhancement	open
46	Problems saving and loading the Archive page	bug	open

Table 4: ISE, open issues on the GitHub issue tracker

## 3 FLAGSHIP MOBILE APPLICATION

### 3.1 OVERVIEW OF THE FIRST ROUND

As for the ISE, the first round of evaluation of the FMA was based both on the test cases and on the feedback collected via a dedicated online form, reachable on the reserved area of the EAGLE portal.

Six testers have performed the tests separately; the tests have involved members of partner institutions or affiliated projects of EAGLE, and one private user that volunteered. The test grid where the outcome of the tests was collected is an updated version of the model included in the Appendix of D5.5. A brief discussion on the planning phase and a summary of the results is offered in section 3.2.

Currently, the application exists only for Android and is installable after downloading the Android Application Package (APK) from the EAGLE portal<sup>7</sup>. Although the app did circulate among the developers and was therefore available for the execution of the tests, the installation file was uploaded to the EAGLE website at the end of April 2015. Therefore, general feedback collection via a dedicated online form became possible only since May 2015 and it is still ongoing. Currently, we have identified 1 issue via that channel that supplements the list drawn from the test cases. Based on the combination of both the test results and the bug reported in the feedback form, we have compiled a list of open issues that was submitted to the board of the developers, the supervisors of the content aggregation, the leader of the validation taskforce, and the project management. The list is reported in section 3.2.3. The plan of actions to be undertaken in order to solve the issues is discussed in section **Errore. L'origine riferimento non è stata trovata..**

People from the following partner institutions or affiliated projects have submitted feedback during the first round of validation, either by executing the test cases or by filling the online form:

- University of Bari
- University of Heidelberg
- Oxford University
- Deutsches Archäologisches Institut
- University of Leipzig / Perseids
- The Cyprus Institute

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<sup>7</sup> The APK file can be downloaded from: <http://www.eagle-network.eu/resources/flagship-mobile-app/>

## 3.2 THE TESTS

### 3.2.1 Planning and execution of the test cases

Unlike to what happened with the ISE, it proved impossible to start the validation before the General Meeting in Cyprus. The fact that the application runs only on Android and that no iOS version has yet been implemented had limited the number of potential testers; at the same time the installation of application from APK files (a feature that is not enabled by default on Android) required more assistance than it was necessary for the testing of the ISE. Instead of being an occasion for discussion of the preliminary result, the project meeting was the venue to involve partners and potential users in the testing process.

Although the installation of the FMA is certainly an important part of the user experience and a key feature to validate, we reserve to test the behavior of the app at the installation only after the next release, and once that the FMA is made available through the official channels.

Before the execution of the test, the steps and requested procedures in the template grid of D5.5 were updated to reflect the actual implementation of the requirement discussed in D5.3.1. The testers were provided with the new text grid (v. 1.0) and with a sample of images of monuments from the EAGLE collection that could be used to verify the search functionality of the app. The sample monuments were chosen among the first items that were indexed by the image recognizer service, so that we could be sure that positive matches could be attained both with Exact Match and Similarity Search. However, testers were encouraged to try the application also with other images of their choice. No suggestion was made in the online feedback form: the users interested in submitting their feedback via that channel were free to choose whatever image they preferred for testing purposes.

Table (in Section 6.2 of the Appendix) lists the final version of the test cases that were diffused to the testers.

### 3.2.2 Results

Table 5 reports a synthetic overview of the test results.

Test Case	Tester 1	Tester 2	Tester 3	Tester 4	Tester 5	Tester 6
MT1.0	OK	OK	OK	OK	OK	OK
MT1.1	F	F	F	F	W	F
MT1.2	OK	F	F	OK	W	OK
MT3.0	OK	OK	OK	OK	OK	OK
MT4.0	OK	OK	OK	OK	OK	OK
MT4.1	OK	OK	OK	W	W	OK
MT5.0	OK	F	F	W	OK	F
MT5.1	OK	OK	OK	W	OK	OK
MT5.2	W	OK	OK	W	OK	OK

MT6.0	W	F	F	OK	OK	F
MT7.0	OK	OK	F	OK	W	OK
MT7.1	F	F	F	F	W	F
MT8.0	OK	F	F	W	OK	F
MT8.1	OK	F	F	W	OK	F
MT9.0	OK	F	W	OK	OK	OK
MT10.0	F	F	F	F	F	F
MT10.1	F	F	F	F	F	F
MT11	OK	F	OK	OK	OK	OK

Table 5: Test case results: overview. Results: OK = OK; W = Warning; F = Failed

As it is to be expected (see the discussion in D5.3.1), the communication between the FMA and the EAGLE server does not yet implement all the specifications of the system architecture. In particular, the **account management** in the FMA is not yet integrated with that of the EAGLE overall system, so that only the users in posses of a valid EAGLE personal account can access to the functions reserved to the registered users. At the moment, the user's temporal space on the FMA and most of the functions for registered users are correctly accessed after login (test case MT1.0), as it is recommended in the requirements. However, the access is not limited to the valid EAGLE accounts (MT2.0 and MT2.1; see issue fma3.0 in the next section).

Conversely, the other key feature for content saved by registered users (i.e. the capability to access the items saved during the sessions with the FMA in the archive areas of the EAGLE portal) was not tested, as the data exchange between the FMA server and the EAGLE server is still not implemented.

Testers reported problems with those test cases that requested interaction with the **items saved** in the temporary private area after logging in (MT7.1, MT10.0, MT10.1). Whether they were asked to retrieve an element from the chronology, or to load and edit a saved query or a saved single record, users were unable to manipulate the items.

One tester reported a “creation error” when trying to save the query picture. At the moment, we weren't able to replicate the issue: the question will be subject to further research.

However, the most serious issue was observed with query results, when the documents retrieved by the search are loaded in the app. With several documents of the EAGLE collection, users reported repeated crashes when the application attempts to access the single result. Application crashes occur both before an item is displayed on the screen as a result of an Exact Match, and after a user clicks on an item in the result list returned by a Similarity Search. This fact strongly suggests the hypothesis that the problem lies in the way documents are handled by the FMA, at the end of the exchange of information between the app and the image recognizer. So far, the issue has been confirmed with the files in the sample provided to the users, as well as with other images of the EAGLE collection.

### 3.2.3 List of identified issues

After reviewing the outcome of the test cases and the feedback sent via the online form, the validation team agreed on the list of open issues that is reported in Table 6. See pag. 14, for the meaning of the different statuses assigned.

ID	Description	Status	Notes
fma1.0	No iOS version of the app is available	Confirmed	
fma2.0	The app is not available on the Google Play market	Confirmed	
fma3.0	Login capability is not limited to the registered valid EAGLE account. It is possible to login with any username-pwd combination	Confirmed	
fma4.0	No interaction is possible with the items saved in the chronology list	Confirmed	
fma5.0	The application crashes when loading the data for some results. In particular, with specific inscriptions or images it crashes both when loading the result of an Exact Match or when selecting an item from the results returned for a Similarity Search	Confirmed	
fma6.0	After a similarity search is performed, the back button on top of the single record doesn't take back to the search results but to camera mode. This way, the original search is lost	Confirmed	
fma7.0	"Creation error: geolocation unavailable" when trying to save items; the error persists even after activating the geolocation in the Settings	Non confirmed	

Table 6: FMA, list of open issues

### 3.3 ACTION PLAN

As for the ISE, we decided to open a GitHub repository for the FMA, where the open issues will be reported and tracked. The issue tracker is already accessible at: <https://github.com/EAGLE-BPN/flagship-mobile-app/issues>.

In relation to the open issues of Table 4, the highest priority was assigned to diagnose and solve the crashes of the application when the EAGLE inscriptions are loaded (fma5.0 above). The task team decided to work with a group of 7 new images of inscriptions already included in the EAGLE collection. These images will be used to test the responses of the app and to identify the elements in the data that cause the app to close. In order to diagnose the problem, coordination will be assured between the two sides that manage the Image Recognizer and the content aggregator on the one hand and the FMA server on the other.

The application will be presented to the public during the Sixth EAGLE International Event in Bari on September 24<sup>th</sup> and 25<sup>th</sup> 2015. By September release 2.0 of the application is also scheduled.

## 3.4 SECOND EVALUATION ROUND

### 3.4.1 Overview

The second release of the FMA was tested with the same approach as the ISE. After the first round of evaluation, we used the GitHub bug tracker to keep track of the open issues; as soon as an iOS beta version was circulated among the partners, we proceeded to test the functionality of the app on iPhones. We asked five testers, selected among the partners and potential users, to perform the use cases and report the results with the same methodology as for the first round.

In the following sections we discuss the results of the test cases and list the issues that have been collected through all the channels.

### 3.4.2 Use cases

As for the first round, five testers have performed the test cases that we prepared for the new functions integrated after the second release and for those that required supplementary testing.

In particular, we have focused our test cases on the following functionality:

- Login interface, both with valid (2M1.0) and invalid credentials (2M1.1);
- “Exact Match” with genuine EAGLE items (2M2.0) and unrecognizable images (2M2.1);
- “Similarity Search” (2M3.0);
- textual search (2M4.0);
- interactions with the chronology and the area for saved items, including:
  - “new-item” mode (save and upload a new picture: 2M5.0)
  - save, upload and retrieve results of both exact match (2M6.0) and similarity search (2M6.1)
  - update (2M7.0) and delete elements in the chronology (2M7.1)

The complete list of the use cases (with expected outcome) is reported in the appendix, Section 6.2.2. The results of the tests are reported in Table 7 7.

Test Case	Tester 1	Tester 2	Tester 3	Tester 4	Tester 5
2M1.0	OK	OK	OK	OK	OK
2M1.1	OK	OK	OK	OK	OK
2M2.0	OK	F	OK	F	W
2M2.1	OK	OK	OK	OK	OK
2M3.0	OK	W	OK	OK	OK
2M4.0	F	F	F	F	F
2M5.0	F	F	W	F	F
2M6.0	OK	W	F	W	OK
2M6.1	W	OK	OK	OK	OK
2M7.0	OK	F	W	W	F
2M7.1	OK	F	OK	OK	W

Table 7: Test case results (2<sup>nd</sup> round): overview. Results: OK = OK; W = Warning; F = Failed

### 3.4.3 Final evaluation and future actions

The final version of the test cases was run after the two versions were published on the iTunes and the Google Play stores. In this way, the installation of the app from the official repository was a prerequisite that, although not explicitly tested, was considered mandatory before the other test cases could be executed. By this, although the outcome is not formally shown in the chart above, we can confirm that the installation process works as expected; no problem with installation has been reported so far. Issues #1 and #2 on the tracker (cf. fma1.0 and fma2.0 on Table 6 above) are therefore closed.

The login system is also now fully supported and integrated with the EAGLE accounts (#3).

While the bug that caused the application to crash after an exact-match query (issue #5 and fma5.0) has been rapidly fixed, the "Exact Match" function is sometimes not returning results when they are expected. This problem is especially frequent with on-screen or printed representations of inscriptions, which are by necessity used more often than real-life monuments for testing purposes. This issue is responsible for the Failed/Warning status that some testers issued for test cases 2M2.0 and 2M6.0. Similarity search, on the other hand, works as expected. Preliminary testing by the developers has shown that the problem is not related to the user application. In cases where users obtain no results even when they expect to find one, no results are in fact returned to the application by the image recognition service. A fine-tuning of the image recognizer is therefore recommended, so that the best accuracy of the results is preserved and that the expected results are returned as much as possible.

While the previously mentioned issue has naturally some effects on the way the results of the exact matches are handled in the chronology (2M6.0), the general dynamic of saving items and retrieving them on the EAGLE portal is shown to work in the case of the Similarity Search.

The other main problems are connected to textual search and to the chronology of saved items.

At the moment textual search does not work. No matter what string is entered on the search field, an overwhelming quantity of unrelated results are returned; it seems likely that the entire collection is in fact returned as matching.

The function to save new items is based on a use case where a user takes a picture of an unknown inscription (or a new and better picture of a known monument) and decides to save it in her private space. This saving function for images works as expected in the FMA. However, users are not enabled to update their picture to their private space on the EAGLE server, and thus to access the picture from the EAGLE portal. The portal does not have the capability of loading and handling objects that are not part of the EAGLE collection.

The partners have agreed from the beginning that the EAGLE collection will not accept individual contributions from the users. For this reason, the use case that is behind the "New Item" functionality is supported only on a limited scale: users that upload a private picture of a previously unknown monument or a new picture of a known one will not be able to share the image with the other EAGLE users or to connect their images with a record in the collection. Therefore, given also the amount of work that the support of user-contributed content (which, as we just said, will always remain private), it has been proposed to hide or eliminate the "new item" mode.

As for the items saved in the chronology, testers have shown some frustration with the fact that the possible interactions with them only include editing and deleting them. It is not possible, for instance, to select them or reload the query to access the results; this was felt as a limitation that should be addressed.

These observations have led us to update the list of the issues on the GitHub tracker. The tracker now include 8 closed issues and, 5 open problems. Open and closed issues are listed below in Table 8.

ID	Description	Type	Status
9	Text search not working	bug	open
10	New items not syncing with EAGLE portal	bug	open
11	Items in the chronology cannot be visualized/accessed	enhancement	open
12	Exact match does not return results even when pictures of EAGLE monuments are taken	bug	open
13	Camera screen freezes after Exact match	bug	open
1	iOS version	enhancement	closed

2	Android version not installable from Google Play	enhancement	closed
3	Login capability is not limited to the registered valid EAGLE account	bug	closed
4	No interaction is possible with the items saved in the chronology list	bug	closed
5	The app crashes after Exact Match and when loading documents form the Similarity result list	bug	closed
6	Back button with results of Similarity Search	enhancement	closed
7	“Creation error: geolocation unavailable” when trying to save items	question	closed
8	Timeout with similarity search	bug	closed

Table 8: FMA, open and closed issues on the GitHub issue tracker

As in the case of the ISE, the partners have agreed to grant additional support after the official end of the project in order to fix these issues.

## 4 FLAGSHIP STORYTELLING APPLICATION

### 4.1 OVERVIEW OF THE FIRST ROUND

The first round of evaluation of the FSA is based both on text cases and on the feedback collected during an experiment that involved volunteering partner that were encouraged to publish stories about inscriptions using the application.

Five testers have performed the tests separately; both members from partner institutions and external users were involved in the process. The test grid where the outcome was recorded is an updated version (v.1.0) of the model included in the Appendix of D5.5. A brief discussion on the planning phase and a summary of the results is offered in section 4.2.

Instead of opening a form for general feedback, we decided to concentrate on a more targeted experiment that involved volunteers from our partner institutions. One of the key goals of the EAGLE project is that of bringing the inscriptions that survive from the Antiquity closer to the attention of the general public. Content providers were invited from the start to identify notable documents within their collections that can be used to illustrate particularly interesting events or aspects of the Ancient World. The publication and dissemination of these narratives was immediately identified as an ideal use case for the FSA. The content providers who volunteered were thus guided to publish their own stories using the new application and its multimedia capabilities. That task received high priority after the release of v.1.0 of the FAS and was conducted between March and May 2015. It provided a very fruitful occasion to collect both materials for dissemination purposed and feedback on the application itself<sup>8</sup>.

9 volunteers who had previously submitted texts or ideas were provided with an account that allowed them to create and edit stories; they were also assisted in the task of enriching their narratives with images and other multimedia content for publication on the web. Staff from the following partner institutions or affiliated projects took part in the initiatives (test cases or publication of stories) mentioned above:

- University of Heidelberg
- Deutsches Archäologisches Institut
- University of Rome, La Sapienza
- Babeş-Bolyai University, Cluj-Napoca
- Scientific Research Centre of the Slovenian Academy of Sciences and Arts
- University of Oxford
- University of Leipzig / Perseids

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<sup>8</sup> 18 stories are currently published on the FSA starting page of the EAGLE website, at: <http://www.eagle-network.eu/stories/>

- British School of Rome
- University of Bari

## 4.2 THE TESTS

### 4.2.1 Planning and execution of the test cases

The choice to develop the FSA as a plugin for WordPress (which is discussed and documented in D5.4.1) had considerable impact on the first round of evaluation. First of all, the timing of the first release had to be changed from the recommendations of the D5.1 for the reasons discussed in D5.4.1. While the app was released to the public in February 2015, the implementation of some functionality prioritized as “high” had to be postponed to an intermediate release or directly to version 2.0. This, in particular, involves the functionality to search and add content from special repositories to the stories. The tests related to those functions (ST8.0, ST8.1, ST8.2) were still maintained in their original format in the grid used by the testers, in spite of the fact that their infelicitous outcome was known from the outset. This decision was taken in order to include the missing functionality in the list of open issues, so that they can be assigned to the milestone calendar of version 2.0.

Other test cases have become irrelevant given the design choices illustrated in D5.4.1. This was, for example, the case with the former ST7.1 in D5.5, which was based on the workflow to format parts of the text as section headers. Since this functionality is now abandoned (and section header can be formatted using other commands, e.g. formatting a string in bold typeface as in the current ST7.1, former ST7.2), we eliminated the test case.

Table in Section 6.3 of the Appendix lists the final version (v.1.0) of the test cases that were used by the testers to report their results.

### 4.2.2 Results

Table 9 reports a synthetic overview of the test results.

Test Case	Tester 1	Tester 2	Tester 3	Tester 4	Tester 5
ST1.0	OK	OK	OK	OK	OK
ST1.1	OK	OK	OK	OK	OK
ST1.2	OK	OK	OK	OK	OK
ST3.0	W	OK	F	W	OK
ST4.0	OK	W	OK	OK	OK
ST5.0	OK	OK	W	OK	OK
ST6.0	OK	OK	OK	OK	OK
ST7.0	OK	OK	OK	OK	OK
ST7.1	OK	OK	OK	OK	OK
ST8.0	F	F	F	F	F
ST8.1	F	F	F	F	F

ST8.2	F	F	F	F	F
ST9.0	W	OK	OK	OK	OK
ST10.0	W	F	OK	F	W
ST11.0	OK	OK	OK	OK	OK
ST12.0	OK	OK	OK	OK	OK
ST12.1	OK	OK	OK	OK	OK

Table 9: Test case results: overview. Results: OK = OK; W = Warning; F = Failed

As a plugin of the general WordPress installation, the FSA **account management** process is flawlessly integrated within the overall EAGLE architecture. Users with registered account for the EAGLE portal are enabled to access the story editor as well. At the same time, only those users that are in possess of the appropriate credentials are able to create, edit and publish stories. Logout (ST3.0) is also unproblematic; however, the fact that the users are taken back to the login interface after logout and that there is no direct way to be redirected quickly to the main storytelling page has disoriented some of the testers (hence the few “failed” or “warning” statuses on ST3.0 and ST10.0).

The integration within the WordPress editor also ensures that the process of **publication**, and management of the different editorial stages (draft visible only to authors and administrators, publishing, withdrawal from publication, deletion) is seamless. Authors can manage their stories and decide to withdraw them from publication or delete them as they like, in accordance with the requirements of D5.1.

As it is to be expected, the biggest challenge remains the core functionality of searching and integrating epigraphical or epigraphy-related content into the texts. At the moment, no interface to browse the collections indicated in the functional requirements and in the preliminary use cases have been provided to the users.

#### 4.2.3 List of identified issues

After reviewing the outcome of the test cases and the feedback we received, the validation team agreed to summarize the open issues to the list that is reported in Table 6.

ID	Description	Status	Notes
fsa1.0	The functionality to search and include content from the EAGLE collection is missing	Confirmed	
fsa2.0	The functionality to search and include content from the external repositories (see D5.1 and STE08) is missing	Confirmed	

Table 10: FSA: list of open issues

## 4.3 ACTION PLAN

In view of the coming milestone of v.2.0 highest priority is given to the implementation of a search plugin for content related to epigraphy. This plugin, that will be integrated (as the test cases of v.1.0 suggest) into the media library and launched with the “Add media” button of the TinyMCE editor of WordPress, will be the key feature of the new release.

Given the positive results of ST1.0, 1.1, 1.2 and ST3.0 and the fact that the account management is shared by the portal and the FSA, login/logout tests will not be repeated in the next round. However, one aspect that remains to be solved is the creation of a special “storytelling author” profile, distinct from the general role “author” credited for the whole WordPress installation of the EAGLE portal. This new role will be perfected for v.2.0 and duly texted in the next round.

The application will be presented (with the new features to be included in v.2.0) during the Sixth EAGLE International Event in Bari on September 24<sup>th</sup> and 25<sup>th</sup> 2015.

## 4.4 SECOND EVALUATION ROUND

### 4.4.1 Overview

In order to test the final release of the Storytelling App, we have decided to concentrate on the functional aspects and on the issues of usability. On account of the experimental nature of the web application, which doesn’t have any comparable model in the panorama of digital epigraphy, the latter aspect of usability was considered particularly important.

For these reasons, we conducted a series of usability tests by interviewing a group of three testers at two different stages of development. As in the test cases, we followed Krug (2005) in keeping the number of testers limited to three persons, chosen among the partners of the project and potential users of epigraphic resources. The usability tests were conducted remotely.

The functional aspects were tested using updated test-case grids, which reflected the functions that were implemented after the first round or that needed to be reevaluated. After the release of the application, a bug tracker was opened on GitHub for the Storytelling Platform as well, following the model that was experimented with success for the ISE and FMA.

The Storytelling Application and the “Stories” page were presented in their final forms to the public during dedicated sessions at “Sixth EAGLE International Event” (Bari, 24 September 2015) and at the “EAGLE 2016 International Conference” (Rome, 27 January 2016). A workshop was dedicated to a “hand-on” tutorial on how to create epigraphy-related stories using the FSA (“Pre-Conference Workshop 3. The Eagle Storytelling App”, Rome, 26 January 2016). Other initiatives to promote the use of the application, and thus obtain feedback from our users, included the launching of the “EAGLE 1<sup>st</sup> Short Story Context”, where participants were encouraged to submit stories using the FSA<sup>9</sup>. Finally, we are actively

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<sup>9</sup> Further information and the list of winners can be consulted online at: <http://www.eagle-network.eu/results-of-the-eagle-1st-short-story-contest/>

promoting the diffusion of application and of the stories in education. The FSA was presented at the “Liceo Statale Terenzio Mamiani” (Rome) to the high-school students involved in the educational programme launched by the British School at Rome in order to promote the EAGLE project and encourage pupils of a number of “licei classici” and “licei scientifici” of Rome in the use of the Story Telling Application and Wikimedia for translations.

At the moment, 28 stories have been published in the Storytelling Platform, authored by 10 different authors.

#### 4.4.2 Usability tests

We decided to focus our usability studies especially on the “Stories” page and on the interaction between readers and the multimedia boxes of the embedded content. Our aim was to capture the reactions of the users when confronted with the collection of the stories and with the published content. We wanted to assess how easy it is for a user with minimal information to understand the type of content she is confronted to, and, secondarily, to get tutorials and information on how to access the more advanced functionality of the site.

After been asked to describe the “Stories” page on the EAGLE portal, our three testers were confronted with the following four scenarios:

1. “you have heard of the existence of the EAGLE Storytelling App and of the EAGLE stories. You decide that you want to learn more about it and go to the web page; in particular, you want to explore the published content and see if there is some story that interests you; what would you do?”
2. After the testers find an interesting story, they are asked to describe what they see and to interact with the content (with or without reading the text).
3. “You might be interested in using the app to contribute your own narrative, but you’re still not quite sure; you would like to get more information and learn how to become an author; where would you look?”
4. “You are now a registered user and are working to your story; you would like to insert new multimedia content using the find-and-embed capabilities of the app; what would you do? Where would you look for help?”

The results of these tests were remarkably consistent. In particular, the outcome of scenarios 1 and 2 was unexpected for us, and forced us to rethink several details that were implemented following the functional requirements (D5.1).

In answering the demands of scenario 1, the testers were consistently ignoring most of the menus in the right column for searching and filtering the content (D5.4.2, pp. 12-13). Even when they declared their intention of browsing the collection using “keywords”, they utterly ignored the “keyword word cloud” that (according to requirement STE02) allowed them to visualize and use the most frequent keywords. Users showed a strong preference for directly browsing the list of stories or for using the free-text search box.

As a consequence, we redesigned the access page of the storytelling platform, simplifying the search options and introducing a new method to get access to the full content. The topmost part of the window of the new page was redesigned and the new look is visible in Figure 1.

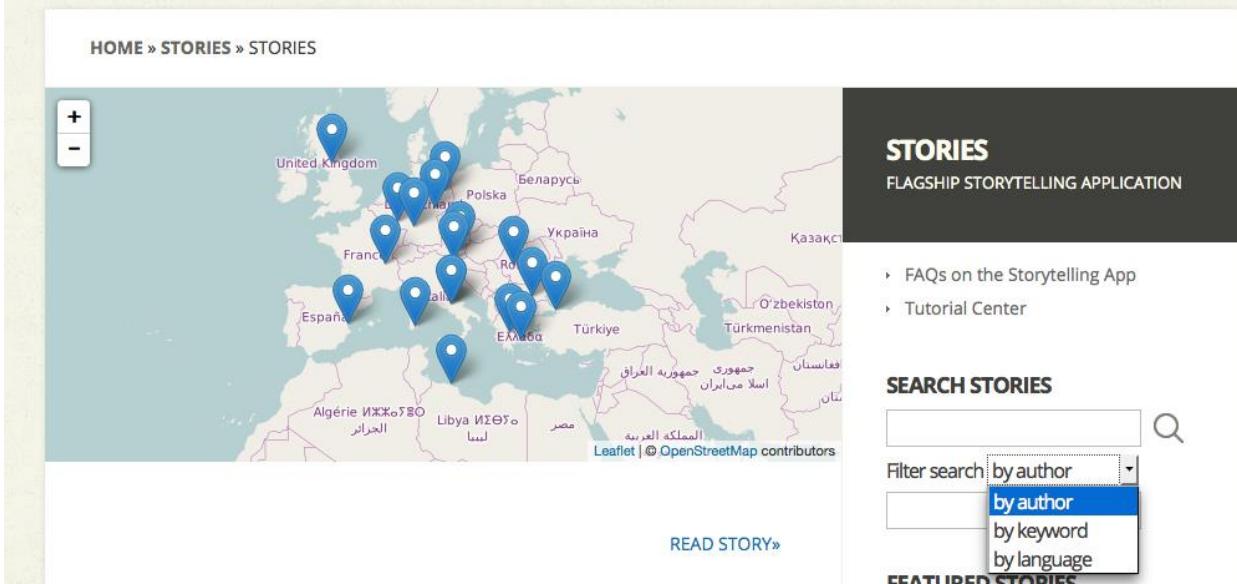


Figure 1: FSA, new search interface

As it can be seen, the filtering options were not eliminated, but they were grouped together and can be now selected using a drop-down menu. The word cloud was suppressed and we substituted it with an interactive map that displays all the locations or geolocalized items (e.g. EAGLE inscriptions that display coordinates) included in the stories. By clicking on the pins on the map, a user can visualize the stories where the location is referenced and use the link to access each story. The map is automatically updated every time a new location is added and is now placed in the topmost part of the "Stories" page, in a similar outline as the homepage of the Epigraphic Database Heidelberg<sup>10</sup>. Our users responded positively to these restyles both in presentations and in successive usability tests.

Scenario 2 confirmed also that some improvements in usability were necessary for the interactive boxes with multimedia content. Users were confused by the exact functions of the menus to interact with them; the icons (magnifying glass and eye), in particular, were an additional source of confusion: the explanation text that was provided for them was also mostly overlooked, and the "expand" functionality to get proper access to the full extent of the item or the map (which was originally confined only to a bar at the bottom of the box) was not understood. The icons are now larger, always visible and the text describing the command is given much greater evidence; the "enlarge" icon is also provided with its proper icon along with the magnifying glass and the eye (see Figure 2).

Scenarios 3 and 4 helped us designing the tutorials, "how-to's" and "frequently asked questions" that are now published together with their stories. A video tutorial (to be published in YouTube and integrated in a page of the portal) is also in preparation.

<sup>10</sup> <http://edh-www.adw.uni-heidelberg.de/home/>

L(ucius) Calidius Eroticus / sibi et Fanniae Voluptati v(ivus)  
 computemus. Habes vini ((sextarium)) I , pane(m) / a(sse) I, pulmentar(ium) a(ssibus) II.  
 Convenit. Puell(am) / a(ssibus) VIII. Et hoc convenit. Faenum / mulo a(ssibus) II. Iste  
 mulus me ad factum / dabit!

Q expand X

**INSCRIPTION FROM AESERNIA**

**Trismegistos-Id:** 282488  
**Material:** lapis  
**Type:** cippus  
**inscriptionType:** sepulcralis  
**originDating:** 101 AD - 200 AD  
**findingSpotAncient:** Aesernia, Sabina et Samnium (Regio IV)  
**findingSpotModern:** Isernia, Italia  
**debug:** libxml version too old - you need at least version 2.7.8 (as shipped with PHP 5.4.0)  
**entityType:** documental  
**Repository:** Epigraphic Database Roma

Figure 2: The new interactive box with an inscription from EAGLE

#### 4.4.3 Test cases

The new functions (including the unsolved issues of the first stage) that we tested in the second round are:

- the capability of adding new content from the EAGLE repository (test case 2S1.0), maps from Pelagios and/or the iDAI.gazetteer (2S1.1), Wikipedia (2S1.2), Europeana (2S1.3), Wikimedia Commons (2S1.4);
- the function to add content directly by copy-pasting the URL from any of the aforementioned repositories (see cases 2S1.0 and children) into the search field of the plugin (2S2.0) or directly into the editor (2S2.1);
- the function to add an EpiDOC-compliant inscription from the Web using the generic reader (2S3.0) or directly by copy-pasting the URL into the editor (2S3.1);
- the function to add inscriptions from the EAGLE collection accessing them directly from the user's personal archive (2S4.0)

The results of the second round of the test cases is reported in Table 11.

Test Case	Tester 1	Tester 2	Tester 3	Tester 4	Tester 5
2S1.0	OK	OK	W	OK	OK
2S1.1	OK	W	OK	W	OK
2S1.2	OK	OK	OK	OK	OK

2S1.3	OK	OK	OK	OK	OK
2S1.4	OK	OK	OK	OK	OK
2S2.0	OK	OK	OK	OK	OK
2S2.1	OK	OK	OK	OK	OK
2S3.0	OK	OK	OK	OK	OK
2S3.1	OK	OK	OK	OK	OK
2S4.0	OK	F	OK	W	F

Table 11: Test case results (2<sup>nd</sup> round): overview. Results: OK = OK; W = Warning; F = Failed

#### 4.4.4 Final evaluation and planned actions

As the table shows at first glance, the status of the tested functionality is mostly positive. The options to include content using the “search-and-insert” menu of the story editor works as expected, and so does the more direct method of copy-pasting the URL of the target source directly into the story. This latter function, although not foreseen at the moment when the functional requirements were drafted, is a key feature of the app, as it greatly improves the user-friendliness of the application and its integration within WordPress; right now, the EAGLE Storytelling Plugin allows users to include content from repositories related to Classical Antiquity in the same way as they would embed multimedia content from popular websites (such as YouTube or Vimeo) using the standard WordPress editor.

The only major problem is with the retrieval of the saved EAGLE items from the private archive of each user. Test case 2S4.0 yielded mixed results, and so did further testing. Some saved items from the collection are regularly retrieved, while others are not available (issue #1 in the GitHub bug tracker)<sup>11</sup>. Supplementary testing has identified the issue in the PHP class that is used to retrieve the items from the archive. The developers of the FSA and the ISE are rewriting and testing the code together in order to make the function more stable.

Minor issues that were reported include two hyperlinks in the help text of the search interface that don't lead to the intended page (respectively: Wikimedia Commons and the Ancient History Encyclopedia). All the issues are listed in the bug tracker page of the dedicated repository of the FSA in GitHub. Open and closed issues, as well as one suggested improvement, are visible in the screenshot of Figure 3.

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<sup>11</sup> <https://github.com/EAGLE-BPN/FlagshipStorytellingApp/issues/1>



Author ▾		Labels ▾	Milestones ▾	Assignee ▾	Sort ▾
<input type="checkbox"/>	① 3 Open ✓ 2 Closed				
<input type="checkbox"/>	⌚ Maps not loading fully			✉ 1	
	#5 opened 2 hours ago by francescomambrini				
<input type="checkbox"/>	ⓘ Distinguish inscriptions and translations in the EAGLE tab	enhancement		✉ 0	
	#4 opened 4 hours ago by francescomambrini				
<input type="checkbox"/>	ⓘ Link in the Wikimedia box for the query not leading to Wikimedia common	bug		✉ 0	
	#3 opened on 27 Jan by francescomambrini				
<input type="checkbox"/>	⌚ Why are the same items (same inscriptions, images...) returned more than once in the EAGLE tab of the "Insert Epigr. Datasource" interface?	bug		✉ 1	
	#2 opened on 27 Jan by francescomambrini				
<input type="checkbox"/>	ⓘ EAGLE archive items are sometimes not loaded	bug		✉ 0	
	#1 opened on 27 Jan by francescomambrini				

Figure 3: open (green exclamation marks) and closed (red excl. marks) issues in the GitHub tracker of the FSA

At the moment when the deliverable is being published, all the tested repositories are fully supported; in addition to the requirements, we now support two more data sources: the “Portable Antiquities Scheme” (Find.org)<sup>12</sup> and the “Ancient History Encyclopedia”<sup>13</sup>. The application was explicitly designed to be flexible and to support the creation of classes to search and embed content from new repositories, so that in the future other websites can be integrated as well.

The application has been submitted to the WordPress official plugin repository. It was published as “EAGLE Storytelling Application” on March 8 2016<sup>14</sup>. The developers have agreed to continue supporting the application to fix the present bugs and any that will be reported to us.

<sup>12</sup> <https://finds.org.uk/>

<sup>13</sup> <http://www.ancient.eu/>

<sup>14</sup> <https://wordpress.org/plugins/eagle-storytelling-application>

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## 6 APPENDIX – LIST OF THE TEST CASES

In this Appendix we list all the test cases that were diffused to the testers. The following tables reflected the latest version that was used by testers to report their results. All the discussion of the previous sessions is based on the following version of the test cases.

For the ease of the readers only the most relevant properties of the grid are reported (in particular the id of the parent test cases have been omitted).

### 6.1 TEST CASES FOR THE ISE

#### 6.1.1 First round

ID	Name	Steps	Expected outcome
PT1.0	Create account	<ul style="list-style-type: none"> <li>- Users must not be logged in</li> <li>- click on the "create account" link</li> <li>- fill in the requested values for Email, Username and Password</li> <li>- click on the "create an account" button</li> </ul>	A new account for the user is successfully created. The user will receive a confirmation
PT1.1	Create account (blank values)	<ul style="list-style-type: none"> <li>- Users must not be logged in</li> <li>- click on the "create account" link</li> <li>- leave all values for Email, Username and Password blank (no text inserted)</li> <li>- click on the "create an account" button</li> </ul>	No account is created. An error message is shown
PT2.0	Sign in into personal account	Sign in into personal account (Advanced search page)	<ul style="list-style-type: none"> <li>- Start from the Advanced Search page on the EAGLE portal</li> <li>- fill in the credential used to login in the EAGLE reserved area (known to the partners)</li> <li>- click on the "Login" button</li> </ul>
PT2.1	Sign in into personal account (invalid credentials)	Sign in into personal account (Advanced search page; invalid credentials)	<ul style="list-style-type: none"> <li>- Start from the Advanced Search page on the EAGLE portal</li> <li>- fill in "test", "test" in the Username and Password field of the "Login" menu</li> <li>- click on the "Login" button</li> </ul>
PT2.2	Sign in into personal account (blank credentials)	Sign in into personal account (Advanced search page; blank credentials)	<ul style="list-style-type: none"> <li>- start from the Advanced Search page on the EAGLE portal</li> <li>- leave the Username and Password field of the "Login" menu blank (no text inserted)</li> <li>- click on the "Login" button</li> </ul>
PT3.0	Sign out	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- select the "Logout" option</li> </ul>	The user should land on the same page she started from; the menu to login becomes available again



PT4.0	Basic search: search the word "consul"	<ul style="list-style-type: none"> <li>- Access the "Basic Search" page</li> <li>- enter the string "consul" in the text field</li> </ul>	Return all the inscriptions that contain the word in the text and in all the other metadata; the output should be a result list, with the results split in pages, with the following columns: Trismegistos ID, Text, Ancient find spot (region), Date, Number of instances. The results returned belong to the type "artefacts" in the EAGLE conceptual model (see Manual, p. 3)
PT4.1	Basic search: search empty string	<ul style="list-style-type: none"> <li>- Access the "Basic Search" page</li> <li>- enter no text in the search field</li> <li>- hit the "Search" button</li> </ul>	Return all the inscriptions in the collections; results should be formatted as in PT4.0
PT4.2	Basic search: use boolean	<ul style="list-style-type: none"> <li>- Access the "Basic Search" page</li> <li>- enter "Volumnio OR Mario" in the text field</li> <li>- hit the "Search" button</li> </ul>	Return all the inscriptions that contains either "Volumnio" or "Mario" in the text or in the other metadata; results should be formatted as in PT4.0
PT4.3	Basic search: enter text in Greek	<ul style="list-style-type: none"> <li>- Access the "Basic Search" page</li> <li>- enter the search string "Αύρηλιος"</li> <li>- hit the "Search" button</li> </ul>	Inscriptions containing the word Αύρηλιος (in Greek alphabet) will be returned
PT4.4	Basic search: search images	<ul style="list-style-type: none"> <li>- Access the "Basic Search" page</li> <li>- enter the search string "filia"</li> <li>- hit the "Search" button</li> <li>- in the first result page, select the tab "Images" on the top of the result list</li> </ul>	The full-text query is performed on the images of the EAGLE collection; a list of images containing the string "filia" in their metadata is returned; for each record, the information specified in the Manual (p. 6) is given
PT4.5	Basic search: search texts	<ul style="list-style-type: none"> <li>- Access the "Basic Search" page</li> <li>- enter the search string "filia"</li> <li>- hit the "Search" button</li> <li>- in the first result page, select the tab "Texts" on the top of the result list</li> </ul>	The full-text query is performed on the objects of the EAGLE collection belonging to the category "Text"; a list of texts containing the string "filia" in their metadata is returned; for each record, the information specified in the Manual (p. 5) is given
PT5.0	Advanced search: search all the honorary inscriptions containing the word "filia"	<ul style="list-style-type: none"> <li>- Access the "Advanced Search" page</li> <li>- enter "filia" in the field "text of the inscription"</li> <li>- Select "honorific inscription" in the menu "type of inscription"</li> </ul>	Return all the inscriptions with "filia" (also with diacritics: e.g. f(ilia)) in the text and "honorific inscription" (or related terms in the controlled vocabularies: e.g. "ehreninschrift") as type of inscription; results should be formatted as in PT4.0



PT5.1	Limit the search to inscriptions with images and/or translations	<ul style="list-style-type: none"> <li>- Access the "Advanced Search" page</li> <li>- enter "filia" in the text field</li> <li>- check the option to search only the inscriptions with images</li> <li>- check the option to search only the inscriptions with translations</li> </ul>	Only the inscription with translations and images are returned as results
PT6.0	Search with and without diacritics	<ul style="list-style-type: none"> <li>- Access the "Basic Search" page</li> <li>- enter "f(ilia)" in the search field</li> </ul>	Only the inscription with the abbreviated form and critic transcription employing the parentheses, i.e. "f(ilia)", will be returned; inscriptions with the unabbreviated word "filia" must not be included in the results
PT6.1	Search with and without diacritics (Advanced Search)	<ul style="list-style-type: none"> <li>- Access the "Advanced Search" page</li> <li>- enter "f(ilia)" in the field "text of the inscription"</li> </ul>	Same as PT6.0
PT6.2	Search with and without diacritics: Greek	<ul style="list-style-type: none"> <li>- Access the "Basic Search" page</li> <li>- enter Αυρηλιος in the search field</li> </ul>	Both the inscriptions without diacritics (i.e. Αυρηλιος) and with diacritics (e.g. Αύρηλιος) should be returned
PT7.0	Access detailed record	<ul style="list-style-type: none"> <li>- Go to "Basic Search" page</li> <li>- enter "filia" in the text field</li> <li>- click on the first result in the returned list</li> </ul>	Users are directed to a page displaying a series of tab (minimum one), one for each of the instances of the same inscriptions available in the collection. Each tab shall contain the field listed in PSE 16 (title, TM ID, thumbnail, etc.)
PT7.1	Access the record in the original page of the CP from the detailed view	<ul style="list-style-type: none"> <li>- Perform a query using the simple or advanced interface</li> <li>- click on the first result in the returned list</li> <li>- in the detailed record view, click on the link to see the record in the original content provider</li> </ul>	Users are redirected to the website of the original content provider of the retrieved record, landing on the page dedicated to this specific inscription
PT7.2	Access detailed record (multiple instances)	<ul style="list-style-type: none"> <li>- Go to "Advanced Search"</li> <li>- enter "Narsis" in the text and select "sepulcralis" from the menu "Inscription type"</li> <li>- select the first result in the list (TM ID = 202554)</li> <li>- in the record page, click to switch tab and visualize the record from another content provider</li> </ul>	For the same inscription (with the same TM ID), one single record is returned in the result list, but at least two tabs are available in the detailed view, each for every content provider that has a record on the inscription. By clicking on the tab, users switch between the records



PT7.2.1	Access detailed record (multiple instances, all matching the same query constraints)	<ul style="list-style-type: none"> <li>- Go to "Advanced Search"</li> <li>- enter "Narsis" in the text</li> <li>- select the first result in the list (TM ID = 202554)</li> <li>- in the record page, click to switch tab and visualize the record from another content provider</li> </ul>	For the same inscription (with the same TM ID), one single record is returned in the result list, but at least two tabs are available in the detailed view, each for every content provider that has a record on the inscription. By clicking on the tab, users switch between the records
PT7.3	Return to the result list (from the detailed record view)	<ul style="list-style-type: none"> <li>- same as 7.0</li> <li>- click the button "Back to result list"</li> </ul>	Users are brought back to the page with the result list
PT8.0	Refine search with faceted categories	<ul style="list-style-type: none"> <li>- search for "filia" in the "Simple Search" page</li> <li>- in the result list, select Material facet from the category list</li> <li>- select "Marmor"</li> </ul>	The records containing the word "filia" and with material = 'marmor' (or related terms in the vocabulary: e.g. "marble") are returned to the users; the number of the results returned corresponds to the number reported in parentheses for the value "marmor" in the material facet
PT9.0	Search with image (default: similarity search)	<ul style="list-style-type: none"> <li>- access the image search interface</li> <li>- upload a picture of an inscription</li> <li>- hit the "Search" button</li> </ul>	A "similarity search" is performed using the EAGLE image recognition service. A list of matching inscriptions ranked in order of similarity with the image used for the search is returned to the user
PT9.1	Search with image (exact match)	<ul style="list-style-type: none"> <li>- access the image search interface</li> <li>- upload a picture of an inscription</li> <li>- select the "exact match" option</li> <li>- hit the "Search" button</li> </ul>	An "exact match" search is performed using the EAGLE image recognition service. Either either the matching inscription or an "image not found" error is returned to the user
PT10.0	Save query results	<ul style="list-style-type: none"> <li>- Login using the the credential used to access the EAGLE reserved area (known to the partners)</li> <li>- search for "filia" in the "Simple Search" page</li> <li>- in the result list, select the option to save query results</li> </ul>	The result list is saved in the personal space of the registered user and can be accessed in the "Archives" area
PT10.1	Save query results (not logged in)	<ul style="list-style-type: none"> <li>- Make sure you are not logged in as a register user (click "logout" if necessary)</li> <li>- search for "filia" in the "Simple Search" page</li> <li>- in the result list, select the option to save query results</li> </ul>	The results are not saved. A message error, warning that the user must be logged in in order to save items, is returned to the user



PT11.0	Save single items	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- search for "filia" in the "Simple Search" page</li> <li>- in the result list, select the first item to access the detailed view</li> <li>- select the option to save the current item</li> </ul>	The inscription is saved in the personal space of the registered user and can be accessed in the "Archives" area
PT11.1	Access single item	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- perform a query using the simple or advanced search</li> <li>- select one item returned</li> <li>- save the item (see PT11.0)</li> <li>- access the personal space selecting the "Archives" option, then "Single Items"</li> <li>- select the item just saved and hit the "View" button</li> </ul>	The saved item is loaded in the same view as in PT7.0
PT12.0	Add/edit notes to single records	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- perform a query using the simple or advanced search</li> <li>- select one item returned</li> <li>- save the item (see PT11.0)</li> <li>- access the personal space selecting the "Archives" option, then "Single Items"</li> <li>- select the item just saved and hit the "Edit" button</li> <li>- insert some text in the field "Notes"</li> </ul>	The note on the saved item is saved and it is stored for the users; it will not be visible by other users or unregistered users
PT13.0	Delete single record	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- perform a query using the simple or advanced search</li> <li>- select one item returned</li> <li>- save the item (see PT11.0)</li> <li>- access the personal space selecting the "Archives" option</li> <li>- select the item just saved and hit the "Delete" button</li> </ul>	The single record is deleted from the personal space and is no longer accessible to the registered user
PT13.1	Delete result list	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- perform a query using the simple or advanced search</li> <li>- save the query (see PT10.0)</li> <li>- access the personal space selecting the "Archives" option</li> <li>- select the query result just saved</li> <li>- hit the "Delete" button</li> </ul>	The query result list is deleted from the personal space and is no longer accessible to the registered user

Table 12: ISE Test cases for the first round, based on v. 1.1

### 6.1.2 Second round

ID	Name	Steps	Expected outcome
2P1.0	Access detailed record (multiple instances)	<ul style="list-style-type: none"> <li>- Go to "Advanced Search"</li> <li>- enter "Narsis" in the text and select "sepulcralis" from the menu "Inscription type"</li> <li>- select the first result in the list (TM ID = 202554)</li> <li>- in the record page, click to switch tab and visualize the record from another content provider</li> </ul>	For the same inscription (with the same TM ID), one single record is returned in the result list, but at least two tabs are available in the detailed view, each for every content provider that has a record on the inscription. By clicking on the tab, users switch between the records
2P2.0	Advanced search: search using the controlled vocabularies	<ul style="list-style-type: none"> <li>- Access the "Advanced Search" page</li> <li>- enter "filia" in the field "text of the inscription"</li> <li>- Select "honorific inscription" in the menu "type of inscription"</li> </ul>	Return all the inscriptions with "filia" (also with diacritics: e.g. f(ilia)) in the text and "honorific inscription" (or related terms in the controlled vocabularies: e.g. "ehreninschrift") as type of inscription; results should be formatted as in PT4.0
2P3.0	Limit the search to inscriptions with images and/or translations	<ul style="list-style-type: none"> <li>- Access the "Advanced Search" page</li> <li>- enter "filia" in the text field</li> <li>- check the option to search only the inscriptions with images</li> <li>- check the option to search only the inscriptions with translations</li> </ul>	Only the inscription with translations and images are returned as results
2P4.0	Advanced search: use chronology to search inscription not before and not after a date	<ul style="list-style-type: none"> <li>- Access the "Advanced Search" page</li> <li>- enter "filia" in the text field</li> <li>- enter a date in the "not before" and "not after" field</li> </ul>	Only the inscription matching the string and the dates indicated are returned
2P4.1	Advanced search: use chronology to search inscription not before with open "not after" limit	<ul style="list-style-type: none"> <li>- Access the "Advanced Search" page</li> <li>- enter "filia" in the text field</li> <li>- enter a date in the "not before" field but leave the "not after" blank</li> </ul>	Only the inscription matching the string and dated to an unlimited time following the indicated date will be returned
2P4.2	Advanced search: use chronology to search BCE dates	<ul style="list-style-type: none"> <li>- Access the "Advanced Search" page</li> <li>- enter "filia" in the text field</li> <li>- enter a date BCE in the "not before" and "not after" field</li> </ul>	Only the inscription matching the string and the dates indicated are returned



2P5.0	View translation(s)	<ul style="list-style-type: none"> <li>- Access the "Basic Search" page</li> <li>- search for an inscription (e.g. enter "filia" in the search box)</li> <li>- use the filters in the right column to select only inscriptions that have translations (hastranslation = yes)</li> <li>- access a record and click on "view translations"</li> </ul>	The user visualizes the available translation(s). If no translation is available, then the users have the option to either access the Wikimedia page to contribute the translation themselves, or to request a translation of this particular inscription by sending an email to the project management
2P6.0	Create account	<ul style="list-style-type: none"> <li>- Users must not be logged in</li> <li>- click on the "create account" link</li> <li>- fill in the requested values for Email, Username and Password</li> <li>- click on the "create an account" button</li> </ul>	A new account for the user is successfully created. The user will receive a confirmation
2P6.1	Create account (blank values)	<ul style="list-style-type: none"> <li>- Users must not be logged in</li> <li>- click on the "create account" link</li> <li>- leave all values for Email, Username and Password blank (no text inserted)</li> <li>- click on the "create an account" button</li> </ul>	No account is created. An error message is shown
2P7.0	Save single items	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- search for "filia" in the "Simple Search" page</li> <li>- in the result list, select the first item to access the detailed view</li> <li>- select the option to save the current item</li> </ul>	The inscription is saved in the personal space of the registered user ad can be accessed in the "Archives" area
2P7.1	Access single item	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- perform a query using the simple or advanced search</li> <li>- select one item returned</li> <li>- save the item (see PT11.0)</li> <li>- access the personal space selecting the "Archives" option, then "Single Items"</li> <li>- select the item just saved and hit the "View" button</li> </ul>	The saved item is loaded in the same view as in PT7.0
2P8.0	Image search	<ul style="list-style-type: none"> <li>- Access the Image Search page</li> <li>- Upload an image file of an inscription</li> </ul>	A similarity search (comparable to the one performed using the FMA) is performed on the collection; a series of results that look similar to the image uploaded is returned to the users

Table 12: ISE Test cases for the 2<sup>nd</sup> round, based on v. 1.0

## 6.2 TEST CASES FOR THE FMA

### 6.2.1 First round

ID	Name	Steps	Expected outcome
MT1.0	Sign in into personal account	<ul style="list-style-type: none"> <li>- Start the FMA- access the "Login"/"Logout" area (green icon, top-right corner)</li> <li>- fill in the credential used to login in the EAGLE reserved area (known to the partners)</li> <li>- select "Login"</li> </ul>	The user is logged in
MT1.1	Sign in into personal account (invalid credentials)	<ul style="list-style-type: none"> <li>- Start the FMA- users must be logged out (see MT3.0)</li> <li>- access the "Login"/"Logout" area</li> <li>- fill in "eagletest" "####" in the user name and password</li> <li>- select "Login"</li> </ul>	The user is not logged in. An error message is displayed
MT1.2	Sign in into personal account (blank credentials)	<ul style="list-style-type: none"> <li>- Start the FMA</li> <li>- access the "Login"/"Logout" area</li> <li>- leave the Username and Password field of the "Login" menu blank (no text inserted)</li> <li>- select "Login"</li> </ul>	The user is not logged in. An error message is displayed
MT3.0	Sign out	<ul style="list-style-type: none"> <li>- Users must be signed in (see MT1.0)</li> <li>- access the "Login"/"Logout" area</li> <li>- select "Logout"</li> </ul>	The user is signed out of her personal account
MT4.0	Perform a similarity search	<ul style="list-style-type: none"> <li>- Users must have a copy of a sample image from the EAGLE collection (e.g. from the img folder attached to the email); the image can be printed (preferred) or displayed on a computer screen</li> <li>- start the FMA</li> <li>- go to Parameters menu (4th tab from left) and select to perform a "Similarity Search"</li> <li>- use the FMA to take a picture of the sample image</li> </ul>	A list of inscriptions (ranked in order of similarity to the searched image and formatted per the indications of MBE02) is returned to the users
MT4.1	Similarity search (no recognizable image in the EAGLE collection)	<ul style="list-style-type: none"> <li>- Start the FMA</li> <li>- make sure that Similarity search is selected (see MT4.0)</li> <li>- point the camera away from the sample image and towards any object that does NOT depict an ancient monument</li> <li>- use the FMA to take the picture of the selected area</li> </ul>	Either a list of "best guesses" from the images in the EAGLE collection or a warning message that no relevant content was found is returned to the users
MT5.0	Exact match	<ul style="list-style-type: none"> <li>- Users must have a copy of a sample image (see MT4.0)</li> <li>- start the FMA</li> <li>- go to the Parameter menu (4th tab from left) and select to perform an "exact match"</li> <li>- use the FMA to take a picture of the image</li> </ul>	The matching inscription is returned to the users
MT5.1	Exact match (no recognizable image)	<ul style="list-style-type: none"> <li>- Start the FMA</li> <li>- make sure "exact match" is selected</li> <li>- point the camera away from the sample image and towards any object that does NOT depict an ancient monument</li> </ul>	No result is returned; users should see a warning message that the requested image was not found



		<ul style="list-style-type: none"> <li>- use the FMA to take the picture of the selected area</li> </ul>	
MT5.2	Similarity search or exact match (no internet connection)	<ul style="list-style-type: none"> <li>- Disable the internet connectivity on your device (e.g. activate "Airplane mode")</li> <li>- access the FMA</li> <li>- select to perform either a "similarity search" (see MT4.0) or an "exact match"</li> <li>- use the FMA to take a picture of the sample image</li> </ul>	No result is returned; a warning message that internet connection is needed in order to search the EAGLE collection is returned
MT6.0	Access the detailed record from the search result list	<ul style="list-style-type: none"> <li>- Users must have a copy of a sample image (see MT4.0)</li> <li>- start the FMA</li> <li>- select to perform a "similarity search"</li> <li>- use the FMA to take a picture of the sample image</li> <li>- select the first item returned in the result list</li> </ul>	The image of the selected record as well as other selected information (title, transcription of the text, type of inscription, type of object, ancient find place (region and city), present location, date, content provider) is visualized
MT7.0	Access the history of the actions performed	<ul style="list-style-type: none"> <li>- Users must be logged in (see MT1.0)</li> <li>- Start the FMA</li> <li>- select the chronology tab from the application menu</li> </ul>	A list of the actions performed by the user (while logged in) is returned, included new items (pictures uploaded), queries and records saved
MT7.1	Retrieve the results from the chronology of queries	<ul style="list-style-type: none"> <li>- Start the FMA</li> <li>- select the chronology tab from the application menu</li> <li>- select the first item from the chronology list</li> </ul>	Either an item (as in MT6.0) or a result list (as in MT4.0) is loaded
MT8.0	Save an item to user area (exact match)	<ul style="list-style-type: none"> <li>- Users must have a copy of a sample image (see MT4.0)</li> <li>- users must be logged in their personal space</li> <li>- start the FMA</li> <li>- select to perform an "exact match"</li> <li>- use the FMA to take a picture of the sample image</li> <li>- once the result is returned, select the option to Save Item</li> <li>- add a Title (mandatory) and Comment (optional)</li> <li>- go to the History tab</li> </ul>	The EAGLE item is saved in the user area, with comment and title entered by the user; the user will be able to see it in the History tab
MT8.1	Save an item to user area (exact similarity search)	<ul style="list-style-type: none"> <li>- Users must have a copy of a sample image (see MT4.0)</li> <li>- users must be logged in their personal space</li> <li>- start the FMA</li> <li>- select to perform a "similarity search"</li> <li>- use the FMA to take a picture of the sample image</li> <li>- select the first item returned in the result list</li> <li>- select the option to Save Item- enter a title and a comment (optional)</li> <li>- save the content and go to the History tab</li> </ul>	The EAGLE item is saved in the user area, with comment and title entered by the user; the user will be able to see it in the History tab
MT9.0	Save a photo of an inscription	<ul style="list-style-type: none"> <li>- Users must have a copy of a sample image (see MT4.0)</li> <li>- users must be logged in their personal space</li> <li>- start the FMA</li> <li>- go to the Parameter menu (4th tab) and select "New Item" as Action Type</li> </ul>	The photo is saved; the user will be able to retrieve, edit and/or delete it from the user area on the mobile app



		<ul style="list-style-type: none"> <li>- use the FMA to take a picture of the sample image</li> <li>- enter a title and a comment to the picture, then save the image</li> </ul>	
MT10.0	Access and delete elements in the user temporary area	<ul style="list-style-type: none"> <li>- Users must be logged in- start the FMA</li> <li>- access the history- select an item</li> <li>- select to cancel the item from the personal area</li> </ul>	The photo, item, or query list is deleted from the temporary user area; it will be not synced with the user space on the EAGLE server
MT10.1	Access and edit notes in the user temporary area	<ul style="list-style-type: none"> <li>- Users must be logged in</li> <li>- start the FMA- access the history</li> <li>- select an item</li> <li>- edit the text of the comment by inserting new text</li> </ul>	A new version of the note, with the added text, is saved in the temporary area
MT11	Save a query (similarity search)	<ul style="list-style-type: none"> <li>- Users must have a copy of a sample image (see MT4.0)</li> <li>- users must be logged in their personal space</li> <li>- start the FMA</li> <li>- select to perform a "similarity search"</li> <li>- use the FMA to take a picture of the sample image</li> <li>- select the option to Save Request (bottom of the result list)</li> <li>- enter a title and a comment (optional)</li> <li>- save the content and go to the History tab</li> </ul>	The query is saved in the user area, with the comment and title entered by the user; the user will be able to see it in the History tab

Table 13: FMA Test cases (1<sup>st</sup> round), based on v. 1.0

### 6.2.2 Second round

ID	Name	Steps	Expected outcome
2M1.0	Sign in into personal account	<ul style="list-style-type: none"> <li>- Start the FMA</li> <li>- access the "Login"/"Logout" area</li> <li>- fill in the credential to access your EAGLE account</li> <li>- select "Login"</li> </ul>	The user is logged in
2M1.1	Sign in into personal account (invalid credentials)	<ul style="list-style-type: none"> <li>- Start the FMA</li> <li>- access the "Login"/"Logout" area</li> <li>- fill in invalid credential</li> <li>- select "Login"</li> </ul>	The user is not logged in. An error message is displayed
2M2.0	Exact match	<ul style="list-style-type: none"> <li>- Users must have a printed copy of the sample image (see MT4.0)</li> <li>- start the FMA</li> <li>- use the FMA to take a picture of the sample image</li> <li>- select to perform an "exact match"</li> </ul>	The matching inscription is returned to the users
2M2.1	Exact match (no recognizable image)	<ul style="list-style-type: none"> <li>- Start the FMA</li> <li>- point the camera away from the sample image and towards any</li> </ul>	No result is returned; users should see a warning message that the requested image was not found



		object that does NOT depict an ancient monument - select to perform an "exact match"	
2M3.0	Perform a similarity search	- Users must have access to a copy of a sample image from the EAGLE collection - start the FMA - use the FMA to take a picture of the printed image - select to perform a "similarity search"	A list of inscriptions (ranked in order of similarity to the search image and formatted per the indications of MBE02) is returned to the users
2M4.0	Test search	- Start the FMA - access the "text search" tab (2nd from left) - enter some text (e.g. "Narsis")	A list of inscriptions containing the entered text in any of the indexed fields (text of the inscription, title, place of finding...) is returned
2M5.0	Save and upload a photo of an inscription	- Users must have a printed copy of the sample image (see MT4.0) - users must be logged in their personal space - start the FMA - select "New Item" as action in the option menu (4th tab from the left) - take a picture of any object or inscription - enter a title and a comment and save the image	The photo is temporarily saved in the user space; it will be available on the personal space on the portal and in the chronology tab of the mobile app
2M6.0	Save and retrieve exact match	- Users must have a printed copy of the sample image (see MT4.0) - start the FMA - make sure "exact match" is selected as action type in the option tab (4th from the left) - use the FMA to take a picture of the sample image - select to save item	The item is temporarily saved in the user space; it will be available on the personal archive on the portal and in the chronology tab of the mobile app
2M6.1	Save and retrieve similarity search	- Users must have a printed copy of the sample image (see MT4.0) - start the FMA - make sure "similarity search" is selected as action type in the option tab (4th from the left) - use the FMA to take a picture of the sample image - select to save item	The list of items is temporarily saved in the user space; it will be available on the personal archive on the portal and in the chronology tab of the mobile app
2M7.0	Update elements in the chronology	- Users must be logged in - start the FMA - access the chronology (3rd tab from the left) - select a query, an item or a picture - select to update it - change either the title or the comment	The chronology displays the last query, items or picture retrieved and saved by the user; each of the objects is identified by a title (given by the user) and a label (defining its type as: query, item or picture). After the test is performed the information (either the title or the comment) is updated; the new title or comment will be visible the next time the object is accessed in the chronology
2M7.1	Delete elements	- Users must be logged in	The chronology displays the last query,

	from the chronology	<ul style="list-style-type: none"><li>- start the FMA</li><li>- access the chronology (3rd tab from the left)</li><li>- select a query, an item or a picture</li><li>- select to delete it</li></ul>	items or picture retrieved and saved by the user; each of the objects is identified by a title (given by the user) and a label (defining its type as: query, item or picture). After the test is performed, the deleted object is no longer available in the chronology
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*Table 14: FMA Test cases (2<sup>nd</sup> round), based on v. 1.0*

## 6.3 TEST CASES FOR THE FSA

### 6.3.1 First round

ID	Name	Steps	Expected outcome
ST1.0	Sign in into personal account	<ul style="list-style-type: none"> <li>- Start from the FSA starting page</li> <li>- select the option to login</li> <li>- fill in the credential used to login in the EAGLE reserved area (known to the partners)</li> <li>- click on the "Login" button</li> </ul>	The user is logged in; user should land on the same page she started from; the Username and a link to access the personal space should be displayed
ST1.1	Sign in into personal account (invalid credentials)	<ul style="list-style-type: none"> <li>- Start from the FSA starting page</li> <li>- select the option to login</li> <li>- fill in "test", "####" in the Username and Password field of the "Login" menu</li> <li>- click on the "Login" button</li> </ul>	The user is not logged in. An error message is displayed
ST1.2	Sign in into personal account (blank credentials)	<ul style="list-style-type: none"> <li>- Start from the FSA starting page</li> <li>- select the option to login</li> <li>- leave the Username and Password field of the "Login" menu blank (no text inserted)</li> <li>- click on the "Login" button</li> </ul>	The user is not logged in. An error message is displayed
ST3.0	Sign out	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- select the option to logout</li> </ul>	The user is logged out; in the FSA starting page the option to login should be visible again
ST4.0	Create story	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- select the option to create a new story</li> </ul>	A WYSIWYG text editor is loaded; a new story with an empty title and description (the field "Excerpt") is created
ST5.0	Edit title and description	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- select the option to create a new story</li> <li>- select the title and edit it at will</li> <li>- select the Excerpt field and edit it at will</li> <li>- select the option to save the new story</li> </ul>	The new title and description inserted by the user is saved in place of the empty text of the title and description paragraphs
ST6.0	Load and edit a previously saved story from the FSA starting page	<ul style="list-style-type: none"> <li>- Users must be signed in and have created a story (see e.g. ST5.0)</li> <li>- access the starting page of the FSA (where the list of the published stories is visible)</li> <li>- click on the link to edit existing stories</li> <li>- click on the first story in the list of the previously saved stories</li> </ul>	The previously created story is loaded in the editor and can be edited by the users
ST7.0	Create text paragraphs	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- select the option to edit a previously created story (or create a new one)</li> <li>- enter text in the story editor</li> <li>- save the new story</li> </ul>	The new text paragraph is created and the story is saved; it will be possible to read the newly created paragraph the next time that the story is loaded (see e.g. ST6.0)
ST7.1	Create a text paragraph and format a word in bold typeface	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- load or create a story in the editor</li> <li>- create a new text paragraph and write some text</li> <li>- highlight a word in the written text and select the option to format it as "bold"</li> <li>- save the story</li> </ul>	The typeface of the selected word is changed to bold and the formatting is saved



ST8.0	Search and include content from EAGLE	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- load or create a story in the editor</li> <li>- click on the "Add media" button of the editor</li> <li>- select the EAGLE collection from the possible sources of material</li> <li>- enter "filia" in the search box</li> </ul>	A list of inscriptions that match the string entered (in the inscription text or in any other field) is returned to the user, formatted as prescribed in STE10
ST8.1	Search and include content from Europeana	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- load or create a story in the editor</li> <li>- click on the "Add media" button</li> <li>- select "Europeana" from the possible sources of material</li> <li>- enter "funerary inscription" in the search box</li> </ul>	A list of items from Europeana that match the string entered (in the inscription text or in any other field) is returned to the user, formatted as prescribed in STE10
ST8.2	Search and include content from Wikipedia	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- load or create a story in the editor</li> <li>- click on the "Add media" button</li> <li>- select "Wikipedia" from the possible sources of material</li> <li>- enter "epigraphy" in the search box</li> </ul>	A list of pages from Wikipedia that match the string entered is returned to the user, formatted as prescribed in STE10
ST9.0	Move objects and paragraphs	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- load or create a story in the editor</li> <li>- enter or copy/paste a few paragraphs of text in the editor</li> <li>- click on the "Add media" button</li> <li>- add an image (either from a URL or from the available media library)</li> <li>and insert in a random point of the story</li> <li>- click on the inserted image and drag it to a different point of the text</li> </ul>	The image is inserted into the body of the story in the point where the user has dragged it; the story with the new object included is saved
ST10.0	Drafts not visible to unregistered users	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- load or create a story in the editor</li> <li>- add some new content (e.g. by creating text paragraphs, or by searching and including items)</li> <li>- save the story</li> <li>- logout from the personal account</li> <li>- access the FSA starting page</li> </ul>	The newly edited story is NOT visible in the FSA starting page and it cannot be accessed by unregistered users
ST11.0	Publish a story	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- load or create a story in the editor</li> <li>- select to publish the story</li> <li>- logout from the personal account</li> <li>- access the FSA starting page</li> </ul>	The newly edited story is now visible in the FSA starting page and it can be accessed and read (but not edited) by unregistered users
ST12.0	Edit a published story	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- load or create a story in the editor</li> <li>- select to publish the story</li> <li>- access the FSA starting page</li> <li>- select the newly created story</li> <li>- select the option to edit it</li> <li>- add some content to the story (e.g. by creating a text paragraph)</li> <li>- save the story</li> </ul>	The story is published and the new edits made by the authors are immediately saved; the edits made after the publication become visible to the unregistered users after the story is saved
ST12.1	Unpublish a story	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- load a published story (see ST12.0)</li> <li>- select the option to unpublish it</li> <li>- logout from the personal account</li> <li>- access the FSA starting page</li> </ul>	The unpublished story is NOT visible in the FSA starting page and it cannot be viewed by other users

Table 15: FSA Test cases for the first round, based on v. 1.0



### 6.3.2 Second round

ID	Name	Steps	Expected outcome
2S1.0	Search and include content from EAGLE	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- load or create a story in the editor</li> <li>- click on the "Add media or epigraphic Datasource"</li> <li>- select the EAGLE collection from the possible sources of material</li> <li>- enter "filia" in the search box</li> <li>- optionally: limit the search to one of the types of the EAGLE content (Artifacts, Texts, Images)</li> </ul>	A list of inscriptions that match the string entered (in the inscription text or in any other field) is returned to the user; users will be able to insert the items into their stories as interactive boxes
2S1.1	Search and include maps	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- load or create a story in the editor</li> <li>- click on the "Add media or epigraphic Datasource"</li> <li>- select iDAI.gazetteer or Pelagios from the possible sources</li> <li>- enter a location (e.g. "Rome") in the search box</li> <li>- if Pelagios was chosen, select "Place" in the drop-down menu</li> </ul>	A list of locations matching your search will be returned. Users will be able to insert the map into their stories (note: the map won't be displayed in the editor; to check it, click on "Preview")
2S1.2	Search and include content from Wikipedia	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- load or create a story in the editor</li> <li>- click on the "Add media or epigraphic Datasource"</li> <li>- select Wikipedia from the possible sources</li> <li>- enter a string (e.g. "sestertius") in the search box</li> </ul>	A list of pages that match the string entered is returned to the user; users will be able to insert the items into their stories as interactive boxes
2S1.3	Search and include content from Europeana	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- load or create a story in the editor</li> <li>- click on the "Add media or epigraphic Datasource" button</li> <li>- select "Europeana" from the possible sources of material</li> <li>- enter a string (e.g. "funerary inscription") in the search box</li> </ul>	A list of items from Europeana that match the string entered (in the inscription text or in any other field) is returned to the user; users will be able to insert the items into their stories as interactive boxes
2S1.4	Search and include content from Wikimedia Common	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- load or create a story in the editor</li> <li>- click on the "Add media or epigraphic Datasource"</li> <li>- select Wikimedia Common from the possible sources</li> <li>- enter a string (e.g. "Pantheon") in the search box</li> </ul>	A list of pages that match the string entered is returned to the user; users will be able to insert the items into their stories as interactive boxes
2S2.0	Search objects by entering their URL	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- load or create a story in the editor</li> <li>- click on the "Add media or epigraphic Datasource"</li> <li>- select any of the available datasources (except for EAGLE) and click on the link to perform the search directly on the selected website (e.g. go to Wikipedia and search a page using the Wikipedia search engine)</li> <li>- copy the URL and paste it in the search field of the Storytelling Plugin</li> </ul>	The item corresponding to the webpage retrieved from the repository is returned to the user; users will be able to insert the items into their stories



2S2.1	Insert content by pasting directly the item's URL into the editor	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- load or create a story in the editor</li> <li>- click on the "Add media or epigraphic Datasource"</li> <li>- find the URL of an item from any of the supported repositories (except for EAGLE)</li> <li>- copy the URL and paste it directly into the story editor in the desired location</li> </ul>	The item corresponding to the webpage retrieved is added to the story and formatted as an interactive box; the result is identical as if the item had been retrieved using the search-and-insert interface of 2S1.0 and children
2S3.0	Add EpiDoc files (using the search interface)	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- load or create a story in the editor</li> <li>- click on the "Add media or epigraphic Datasource"</li> <li>- select Epidoc from the possible sources</li> <li>- enter the URL of an EpiDoc XML file published on the web (see the text of the search interface for examples)</li> </ul>	The item corresponding to the inscription is added to the story and formatted as an interactive box; the result is identical as if the item had been retrieved using the search-and-insert interface of 2S1.0 and children
2S3.1	Add EpiDoc files (copy-pasting in the editor)	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- load or create a story in the editor</li> <li>- fetch the URL of an EpiDoc XML file published online (see 2S3.0)</li> <li>- paste it directly into the story editor</li> </ul>	The item corresponding to the inscription is added to the story and formatted as an interactive box; the result is identical as if the item had been retrieved using the search-and-insert interface of 2S3.0
2S4.0	Include content from the EAGLE personal archive	<ul style="list-style-type: none"> <li>- Users must be signed in</li> <li>- load or create a story in the editor</li> <li>- use the EAGLE search engine to search one or more inscription(s) and save it/them to your personal space</li> <li>- click on the "Add media or epigraphic Datasource"</li> <li>- select the EAGLE collection from the possible sources of material</li> </ul>	The list of your saved inscriptions is visible underneath the search field; users can select them and include them regularly into their stories, just like any other retrieved items

Table 16: FSA Test cases for the second round, based on v. 1.0