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Report on the Operations of the OpenScienceLink Pilot Services and Services/Processes Improvements

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D7.1.3 Report on the Operations of the OpenScienceLink
Pilot Services and Services/Processes Improvements

February 2016

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Executive Summary

This deliverable reflects the outcomes of tasks T7.1-T7.5 in the third year of the project. The deliverable focuses in the pilot operations of the OpenScienceLink project and the services that implement those via the OpenScienceLink platform. The validation of the five main pilot scenarios of the project is presented via real case studies. In addition, the deliverable reflects the outcome of task T7.5 by illustrating the suggested improvements in the various added-value services, and reports on the improvements made within Year 3, as well as the improvements that are planned for the third year of the project. The overall presentation of the reported results is based on five use cases that stem from the requirements specification documents of the OpenScienceLink project.

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1 Introduction

This deliverable focuses on the operation of the OpenScienceLink pilot services. In particular, the following are reported:

- the current operations of all five pilots;
- the validation of the current state of affairs of every pilot;
- improvements that were made to the pilot services within year 3.

The reporting activities for each pilot correspond directly to the five tasks of the Work Package 7, thus the deliverable will be structured in a task-wise manner. Below is the description of the tasks.

T7.1 Data Journals Lifecycle Management: Validation of the pilot scenarios that are associated with data journals creation and management. As part of the task the five pilot sites engaged researchers in the publishing, classification and linking of experimental datasets. The validation took place via the launched open access Biomedical Data Journal.

T7.2 Research Reviews and Evaluation: Validation of the added-value review process, which enables reviewers and editors to have flexible and instant access to the resources required for the objective, fast and effective completion of the review process. Editors of the Biomedical Data Journal are facilitated by the OpenScienceLink platform in selecting competent reviewers.

T7.3 Management and Visualization of Metrics: Validation of identifying research trends. Different scenarios associated with trends and metrics were piloted in order to assess the efficiency of the services and their ability to adapt to user requirements/needs (regarding trends and metrics). The scenarios that were adopted utilized the focus and the research interest of the scope that the Biomedical Data Journal has.

T7.4 Researchers Collaboration and Linking: Validation of suggesting collaborations between researchers. The operation of this pilot scenario leverages the social networking and semantic search services of the OpenScienceLink platform, via the notion of the co-authorship graphs as they can be inferred by the literature.

T7.5 Services and Processes Improvements: This task was devoted to the reengineering of processes associated with the pilot scenarios that are validated in the above tasks. The task documents on issues identified as part of the previous tasks and it devises remedial actions at the process level. Process refinements are accordingly integrated to the OpenScienceLink platform, in order to be validated and (re)assessed. Additional suggestions of improvements for year 3 are identified and graded in complexity.

2 Per-Pilot Operation Activities Analysis

In this section we report the progress of every pilot and list the respective activities carried out within year 3.

2.1 Pilot 1 Operations

Table 1 below presents the Pilot 1 functionalities, among the ones identified in deliverable D3.1 Rev 2 that were implemented at the third iteration of the OpenScienceLink Platform, along with the relevant Pilot requirements as elicited in deliverable D2.1 Rev 2.

| F-ID | Functionality | Relevant Pilot requirements IDs |
|------------------|--|--|
| F3.1 | Trend detection | F_PR1.10 |
| F3.2u | Trend analysis and presentation | F_PR1.10, F_PR1.11 |
| F1.5 | Dataset call specification | F_PR1.12, F_PR1.21 |
| F1.1 | Relevant datasets detection | F_PR1.12 |
| F1.2 | Dataset with metadata submission | F_PR1.3 |
| F1.7 | Legal and IPR management | F_PR1.3, F_PR1.21, F_PR1.23 |
| F2.2, F2.4, F2.5 | Relevant reviewers identification and invitation | F_PR1.8, F_PR1.13 |
| F2.6, F2.7 | Dataset reviewing | F_PR1.4, F_PR1.6, F_PR1.7, F_PR1.9, F_PR1.14 |
| F2.13, F2.14 | Reviewers rating | F_PR1.15 |
| F2.8 | Comments publication | F_PR1.4, F_PR1.9 |
| F1.3 | Dataset selection | F_PR1.5, F_PR1.21 |
| F1.4 | Dataset publication | F_PR1.17, F_PR1.21 |
| F1.9 | Journal issue semantic linking | F_PR1.22, F_PR1.24 |

Table 1: Pilot 1 functionalities implemented

Scenario of use

Vicky, who is an editor of the Biomedical Data Journal (BMDJ), wants to take a look at the available data journal issues and manage them through the Platform.

Editor Activities - Available Issues

Add Issue

Tutorial

[PDF tutorial for editors](#)

Figure 1: Editor Activities – Available Issues

She selects the Editor Activities tab from the menu (**Error! Reference source not found.**), which leads to the Editor Activities – Available Issues page, where she is presented with a list of her available data journal issues along with the important issue’s deadlines. No issues have been created yet hence the list is blank (Figure 1).

On the Editor Activities – Available Issues page, Vicky notices that there is a tutorial available. She clicks on the “PDF tutorial for editors” link and downloads a PDF document which extensively describes the functionality that the OpenScienceLink platform offers to editors and explains how to accomplish the relevant actions.

Add Issue

Volume:

Title:

Description:

Keywords/Tags

- Allotasis
- Apoptosis
- Calcium
- Dangerous Behavior
- Fibrosis
- Heart Failure
- Hemodynamics
- Homeostasis
- Immune System
- Immunity
- Immunization
- Myocardial Contraction
- Physics

Submission Deadline:

Review Deadline:

Publication Date:

Figure 2: Editor Activities – Add Issue

Vicky wants to create a new journal issue on a hot topic. She clicks the Trends tab from the main menu and is redirected to the Trend search page, where she tries a number of scientific topics

relevant to the journal's thematology in the biomedical domain, in order to evaluate their trendiness. This helps her decide which topic the new issue will be about.

She then navigates back to the Editor Activities – Available Issues page (Figure 1), clicks on the “Add Issue” button and is redirected to the Editor Activities – Add Issue page, in order to add a new issue in the Platform (Figure 2). There, she can specify all the issue's details. She chooses the volume that the issue belongs to (“BMDJ”) from a list of available volumes, specifies its title and adds a description. In the Keywords/Tags field, she can specify a list of relevant keywords. This can be done either a) manually: She starts typing a keyword and the Platform helps her by auto-completing the text with terms stemming from the ontology (Mesh) and clicks the “Add Keyword” button in order to add the keyword in the list, or b) automatically: She just clicks the “Suggest Keywords” button and the Platform automatically processes the provided abstract and suggests Mesh terms associated with it, which are added in the keywords list. Vicky can remove keywords which she thinks are not relevant with the issue by clicking on the red “X” that appears before each keyword. Finally, Vicky specifies the Submission Deadline, the Review Deadline and the Publication Date for the issue and clicks on “Save Changes” in order to save the new issue in the Platform. Accordingly she is prompted with a message, that the issue has been added successfully (Figure 3). Authors using the Platform are now also able to submit datasets for this issue.

Add Issue

The form has been submitted successfully.

[Go to List](#)

Figure 3: Editor Activities – Issue added successfully

She clicks the “Go to List” button and is directed back to the Editor Activities - Available Issues page, where she can now see the newly created issue and manage it by clicking on the four icons on the right of the issue entry, in order to perform the following actions, as appropriate (Figure 4): 1) The file cabinet icon presents the Datasets Submitted by Platform users for the specific issue (Figure 19), 2) the clipboard icon presents the issue details, 3) the pencil-on-paper icon enables editing the issue's details, and 4) the red X icon deletes the issue, which is only possible if no articles/datasets have been uploaded for this issue.

Editor Activities - Available Issues

[Add Issue](#)

[View Reviewer Invitations](#)





| Title | Submission Deadline | Review Deadline | Publication Date | Operations |
|--------------------------|---------------------|-----------------|------------------|---|
| Standing Call 2014-12-30 | 2015-01-27 | 2015-02-28 | |     |

Figure 4: Editor Activities – Available Issues populated

Margaret, who is an author, logs in the Platform and selects the Author Activities tab from the menu which loads the Author Activities – My Datasets page (Figure 5). So far, she has not uploaded any datasets to the Platform, thus this page is empty, with the exception of the upload dataset button. She clicks on that button and the Upload Dataset page loads (Figure 6).

Author Activities - My Datasets

Upload Dataset

Figure 5: Author Activities - My datasets

In the top of this page, she firstly prompted to read the submission guidance by clicking on the provided link. Below, she can input all the dataset related information in a form. This information includes the user's name (prefilled) and affiliation (prefilled, editable), as well as the dataset's name and description, and the call/issue name which it is intended for. The issue name list is populated automatically with the open calls currently available in the Platform. Margaret decides to name her dataset "My first dataset" and to submit it for the Standing Call.

She is further able to provide a number of keywords for describing the dataset's main and minor research topics. By clicking on the buttons "Generate Main Topics" and "Generate Minor Topics" respectively, the Platform processes the text that Margaret provided in the dataset description and automatically extracts the topics based on the ontology terms (Mesh). Alternatively, Margaret starts typing a keyword in the "Main Topics" or "Minor Topics" field and the Platform automatically provides auto-complete text suggestions stemming from the ontology. Margaret selects a Mesh term that accurately describes one of the dataset's main or minor topics and clicks the "add keyword" button. The term is added as a keyword for this particular topic. She then adds another keyword in the same manner. She can delete any of the given keywords by clicking the red "X" next to the term she wishes to remove (Figure 8).

Upload Dataset

Before submission, please read our [Submission Guidance](#) and the [Ethical Responsibilities of Authors](#).

User: **Myfirstname Mysurname**

Affiliation:

Dataset Name:

Description:

Call/Issue Name:

Main Topics:

Minor Topics:

Please list the PubMed IDs of the articles that the submitted dataset has been used in. Multiple IDs should be separated by commas, e.g.: 22345678, 2345786, 2223339

Papers that used the dataset:

Category:

I accept the [Terms and Conditions](#) and have read the [Submission Guidance](#).
Especially, I confirm that:

- the dataset and the article are submitted under the [CC BY-NC-SA 4.0](#) license ([text](#)).
- the dataset and the article **do not contain personal data** (e.g. patients' data) or pseudonymised data (only anonymised data is accepted).

Please consult the [instructions to authors](#) on how your article should be structured and what type of information is required to describe your dataset. Your zip file can contain files of any type, e.g., .pdf, .txt, .xls, .xlsx, .doc, .docx,...

Article (pdf): No file selected.

Dataset (zip): No file selected.

or provide a URL:

Figure 6: Author Activities – Upload dataset

Main Topics:

- Thyroid Hormone Receptor (Receptors, Thyroid Hormone)
- Thyroid Hormone Receptor beta (Thyroid Hormone Receptors be
- Thyroid Hormone Resistance (Thyroid Hormone Resistance Syn
- Thyroid Hormone, T4 (Thyroxine)
- Thyroid Hormone, T3 (Triiodothyronine)
- Thyroid Hormone Receptors alpha
- Reverse T3 Thyroid hormone (Triiodothyronine, Reverse)

Figure 7: Author Activities – Topics auto-complete

Main Topics:

Triiodothyronine

Myocardial Ischemia

Minor Topics:

Animal Experimentation

Mice

Figure 8: Author Activities – Add and remove keywords

Margaret can also specify a list of papers in which the dataset has already been used, by typing the PubMed IDs of the relevant articles, separated by commas. She further chooses a category for the dataset, which can vary between “Research data” or “Clinical trial”.

Then, she is given the choice to check or not a checkbox “I accept the Terms and Conditions and I have read the Submission Guidance”, which is self-explanatory. By clicking on the “Terms and Conditions” part of the text the OpenScienceLink Platform legal terms and conditions regarding datasets are brought up, while clicking on the “Submission Guidance” text the submission guidance is brought up.

Margaret checks the checkbox in order to verify that she has taken knowledge of and agrees with the submission guidelines and the terms and conditions of the OpenScienceLink Platform before uploading the dataset. In case this checkbox is not checked, the Platform does not accept the uploaded dataset and an appropriate message is displayed (Figure 9).

In order to use our services, you must agree to OpenScienceLink Terms and Conditions.

Figure 9: Author Activities – Terms and Conditions not accepted warning

Then she clicks the “browse” button in order to choose the file of the dataset (compressed zip file format) and optionally the accompanying article (PDF file format) on her personal computer and upload them to the Platform (Figure 10). Optionally she can provide the URL of a file residing in the World Wide Web.

Article path: MyArticle.pdf

Dataset path (zip): MyDataset.zip

or provide a URL:

Figure 10: Author Activities – Upload files

Upload Dataset

Before submission, please read our [Submission Guidance](#).

The form has been submitted successfully.

[Go to List](#)

Figure 11: Author Activities – Successful dataset submission

Finally, she clicks “Save Changes” and her dataset is saved in the OpenScienceLink Platform. A relevant message notifies her of the successful completion of this task (Figure 11). Vicky, the issue editor, receives an email message notifying her that Margaret has submitted a new dataset for the issue (Figure 12).



Figure 12: Editor email – Submission received

By clicking the “Go to List” button, Margaret is redirected to her My Datasets page. After uploading a couple of more datasets, which she names “My new dataset” and “My other dataset”, her My Datasets page looks like on Figure 13.

Author Activities - My Datasets

[Upload Dataset](#)

| Dataset Name [^] | Article | Dataset | Dataset URL [^] | Status [^] | Issue [^] | DCI [^] | Last Update [^] | Operations |
|---------------------------|--------------------------|--------------------------|--------------------------|---------------------|--------------------|------------------|--------------------------|------------|
| My other dataset | download | download | | Submitted | Standing Call | | 2014-12-02 | |
| My new dataset | download | download | | Submitted | Standing Call | | 2014-12-02 | |
| My first dataset | download | download | | Submitted | Standing Call | | 2014-12-02 | |

Figure 13: Author Activities – My datasets populated

Margaret notices that she is able to view each of the datasets she has uploaded so far and their metadata, edit them or delete them, by clicking the relevant icons. She is further able to download the submitted articles and datasets to her computer.

Margaret chooses to view the metadata of “My first dataset”. She clicks on the clipboard icon and is redirected to the View Dataset Metadata page (Figure 14). She clicks on “Go Back” to get back to the My Datasets page (Figure 13).

View Dataset Metadata

| | |
|---|---|
| Owner: | Myfirstname Mysurname |
| Affiliation: | MyAffiliation, Greece. |
| Dataset Name: | My first dataset |
| Description: | Heart disease experiment thyroid hormone on mice |
| Call/Issue Name: | Standing Call |
| Main Topics: | ["Heart Diseases"[mesh], "Thyroid Hormones"[mesh], "Thyroid Gland"[mesh], "Thyroid Diseases"[mesh]] |
| Minor Topics: | [Mice[mesh]] |
| Papers where the dataset has been used: | |
| Category: | Research data |
| Article: | download |
| Dataset: | download |
| or URL provided: | |
| Received: | 2016-02-09 |
| Revised: | 2016-02-09 |
| License: | CC BY-NC-SA 4.0 |

[Go Back](#)

Figure 14: Author Activities – View dataset metadata

She then decides to change some of the “My first dataset” metadata. She clicks on the edit icon and is redirected to the Edit Dataset Information page (Figure 15). After she performs her wished alterations she clicks on “Save Changes” and the dataset and metadata are updated in the Platform. Vicky, the issue editor, receives an email notification informing her that Margaret has made changes to her submitted dataset (Figure 16). Subsequently, Margaret is redirected back to the My Datasets page (Figure 13).

Finally, Margaret decides that she wishes to delete “My other dataset”. She clicks on the delete icon and is redirected to the Delete Dataset and Metadata page (Figure 17). She verifies her intention by clicking on “Delete” at the bottom of the page and “My other dataset” along with its metadata is permanently removed from the Platform. Vicky, the issue editor receives another email from the Platform notifying her that “My other dataset” has been deleted by Margaret (Figure 18).

Edit Dataset Information

User: **Myfirstname Mysurname**

Affiliation:

Dataset Name:

Description:

Call/Issue Name:

Main Topics:

- Heart Diseases
- Thyroid Hormones
- Thyroid Gland
- Thyroid Diseases

Minor Topics:

- Mice

Please list the PubMed IDs of the articles that the submitted dataset has been used in. Multiple IDs should be separated by commas, e.g.: 22345678, 2345786, 2223339

Papers that used the dataset:

Category:

Please consult the [instructions to authors](#) on how your article should be structured and what type of information is required to describe your dataset. Your zip file can contain files of any type, e.g., .pdf, .txt, .xls, .xlsx, .doc, .docx,...

Article (pdf): No file selected. [download](#)

Dataset (zip): No file selected. [download](#)

or provide a URL:

Figure 15: Author Activities – Edit dataset information

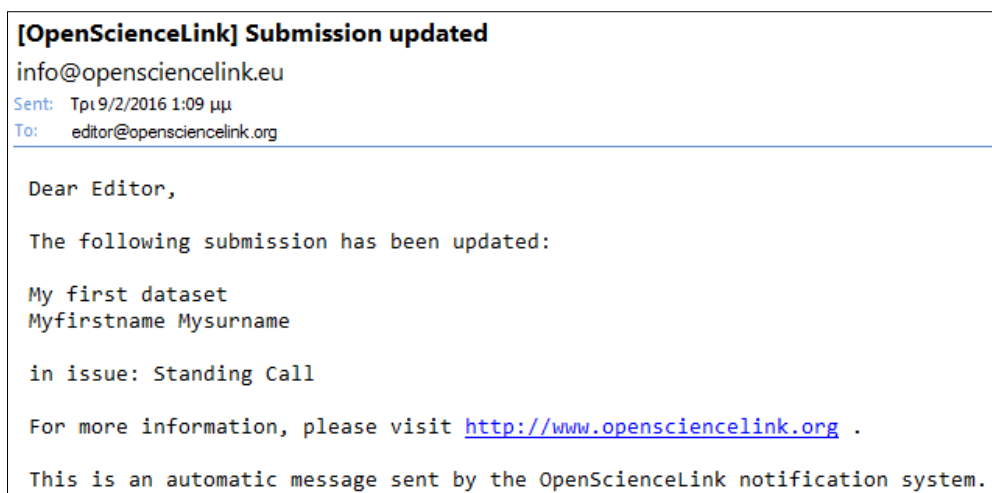


Figure 16: Editor email – Submission updated

Delete Dataset And Metadata

| | |
|---|--|
| Owner: | Myfirstname Mysurname |
| Affiliation: | MyAffiliation, Greece. |
| Dataset Name: | My other dataset |
| Description: | Biomedical dataset no.5 |
| Call/Issue Name: | Standing Call |
| Main Topics: | ["Biomedical Research"[mesh], Deltaretrovirus[mesh]] |
| Minor Topics: | [Mice[mesh]] |
| Papers where the dataset has been used: | |
| Category: | Research data |
| Article: | download |
| Dataset: | download |
| or URL provided: | |
| Received: | 2016-02-09 |
| Revised: | 2016-02-09 |
| License: | CC BY-NC-SA 4.0 |

WARNING: This operation cannot be undone. Are you sure you want to proceed?

Figure 17: Author Activities – Delete dataset and metadata

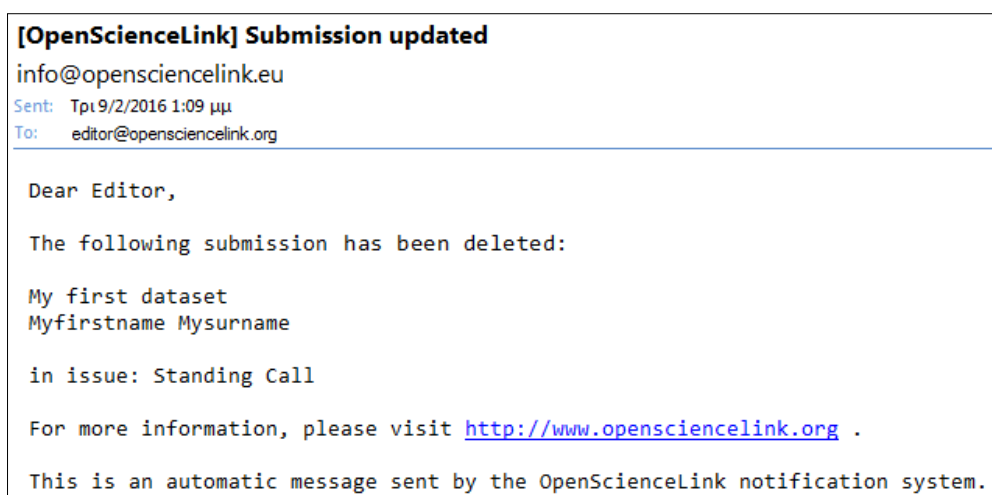


Figure 18: Editor email – Submission updated

Vicky, the editor responsible for /associated with the call that Margaret submitted her datasets to, navigates again to the Editor Activities – Available issues page. The first thing she notices is that she cannot delete the issue call any longer, since some datasets have been submitted by authors (Margaret) for this call and stored in the Platform. She clicks on the file cabinet icon in order to see the submitted datasets and is redirected to the Datasets Submitted to Issue page (Figure 19), where she can view a list of the submitted datasets for the Standing Call and is provided with the opportunity to manage them by clicking on the relevant operations. She can perform the following operations: 1) View the dataset metadata (Figure 20), 2) Contact the dataset author via e-mail, 3) Invite reviewers for this dataset, 4) View the relevant review call, 5) Edit the relevant review call, 6) Delete the review call, and 7) Publish the dataset by giving it a DOI. Additionally, the download links allow her to download the article and dataset files. The availability of operations depends on the status of the review call for each dataset. E.g. in Figure 19 Vicky can only perform operations 1, 2 and 3 for both datasets, but once she has initiated a review call for a dataset she will be able to perform 1, 2, 4, 5 and 6, as long as no reviewers have given a review. If a reviewer provides a review, operation 6 will be disabled. Operation 7 will be available once Vicky has written the final review and accepted the dataset.

Datasets Submitted to Issue: Standing Call

Standing Call

| Dataset Name | Article | Dataset | Dataset URL | Status | Issue | DOI | Last Update | Operations |
|------------------|--------------------------|--------------------------|-------------|-----------|---------------|-----|-------------|------------|
| My first dataset | download | download | | Submitted | Standing Call | | 2016-02-10 | |
| My first dataset | download | download | | Submitted | Standing Call | | 2016-02-10 | |

[Go Back](#)

Figure 19: Editor Activities – Datasets Submitted to Issue populated

View Dataset Metadata

| | |
|---|---|
| Owner: | Myfirstname Mysurname |
| Affiliation: | MyAffiliation, Greece. |
| Dataset Name: | My first dataset |
| Description: | Heart disease experiment thyroid hormone on mice |
| Call/Issue Name: | Standing Call |
| Main Topics: | ["Heart Diseases"[mesh], "Thyroid Hormones"[mesh], "Thyroid Gland"[mesh], "Thyroid Diseases"[mesh]] |
| Minor Topics: | [Mice[mesh]] |
| Papers where the dataset has been used: | |
| Category: | Research data |
| Article: | download |
| Dataset: | download |
| or URL provided: | |
| Received: | 2016-02-09 |
| Revised: | 2016-02-09 |
| License: | CC BY-NC-SA 4.0 |

[Go Back](#)

Figure 20: Editor Activities – View Dataset Metadata

2.2 Pilot 2 Operations

Table 2 below presents the Pilot 2 functionalities, among the ones identified in deliverable D3.1 Rev 2 that were implemented at the third iteration of the OpenScienceLink Platform, along with the relevant Pilot requirements as elicited in deliverable D2.1 Rev 2.

| F-ID | Functionality | Relevant Pilot requirements IDs |
|-------|--|---|
| F2.12 | Review call specification | F_PR2.10 |
| F2.2 | Relevant reviewers identification through literature | F_PR2.10 |
| F2.4 | Reviewer pool suggestion | F_PR2.10 |
| F2.14 | Reviewer rating presentation | F_PR2.10 |
| F2.5 | Reviewer selection and invitation | F_PR2.4, F_PR2.5 |
| F2.6 | Relevant papers retrieval | F_PR2.9, F_PR2.11 F_PR2.17 |
| F2.8 | Review form submission | F_PR2.6, F_PR2.7, F_PR2.8, F_PR2.15, F_PR2.21 |
| F2.13 | Reviewer rating submission | F_PR2.10 |

Table 2: Pilot 2 functionalities implemented

Scenario of use

Vicky, the issue editor, wishes to assign reviewers for the datasets submitted to her latest issue call. She selects the Editor Activities tab from the menu, which loads the Editor Activities – Available Issues page (Figure 4). She then clicks on the file cabinet icon in order to view the datasets submitted to the “Standing Call” issue, and is presented with the Datasets Submitted to Issue page (Figure 19).

In order to assign reviewers for the “My first dataset” dataset, previously uploaded by the author Margaret, she clicks on the green-paragraph-symbol icon and is redirected to the Create Review Call page (Figure 21).

Create Review Call

Call/Issue: Standing Call
 Review Deadline:
 Title: My first dataset
 Abstract: Heart disease experiment thyroid hormone on mice
 Authors: Myfirstname Mysurname
 Keywords/Tags: Heart Diseases
 Thyroid Hormones
 Thyroid Gland
 Thyroid Diseases

Figure 21: Editor Activities – Create Review Call

In the Create review call page, Vicky can see a summary of the details of the issue call as well as the dataset or article to be reviewed, its author and metadata. She clicks on the “Create review call” button and the review call is created. She then is redirected automatically to the Datasets Submitted to Issue page where she can see that the operations for managing the review call have become available (Figure 22). Vicky clicks on the “View review call” button and is redirected to the View Review Call page (Figure 23), where she can see the details of the review call for this dataset, but the list of invited reviewers is missing, since she has not invited any reviewers yet. She clicks on the “Go back” button and is redirected back to the Datasets Submitted to Issue page (Figure 19).

Datasets Submitted to Issue: Standing Call

Standing Call

| Dataset Name | Article | Dataset | Dataset URL | Status | Issue | DCI | Last Update | Operations |
|------------------|--------------------------|--------------------------|-------------|-----------|---------------|-----|-------------|------------|
| My first dataset | download | download | | Submitted | Standing Call | | 2016-02-09 | |
| My new dataset | download | download | | Submitted | Standing Call | | 2016-02-10 | |

Figure 22: Editor Activities – Dataset Submitted to Issue – Review call created

View Reviewer Invitation

Call/Issue: Standing Call
 Review Deadline: Tue Mar 08 12:21:38 CET 2016
 Title: My first dataset
 Abstract: Heart disease experiment thyroid hormone on mice
 Authors: Myfirstname Mysurname
 Keywords/Tags

[Go Back](#)

Figure 23: Editor Activities – View Review Call – No reviewers invited

Vicky now clicks on the pencil-on-paper icon in order to edit the review call for “My first dataset” and invite some reviewers, and is redirected to the Editor Activities – Invite Reviewers page (Figure 24). On this page she is presented with a summary of the review call. She clicks the “Select Reviewers” button and the Editor Activities – Find Potential Reviewers page (Figure 25) appears. This page contains a list of reviewers who are suggested by the Platform depending on their relevance with the topic(s) of the dataset/article to be reviewed. Vicky can add more keywords in order to refine the list of suggested reviewers by typing a new keyword in the respective field and clicking on the “Add Keyword” button. The Platform auto completes the text input by her with terms stemming from the ontology (Mesh). When having specified all the keywords as desired, she presses the “Find Reviewers” button and the reviewers list is updated accordingly.

Editor Activities - Invite Reviewers

Call/Issue: Standing Call
 Review Deadline:
 Title: My first dataset
 Abstract: Heart disease experiment thyroid hormone on mice
 Authors: Myfirstname Mysurname
 Keywords/Tags: Heart Diseases
 Thyroid Hormones
 Thyroid Gland
 Thyroid Diseases

[Select Reviewers](#) [Write Final Review](#)

[Go Back](#) [Update Deadline](#)

Figure 24: Editor Activities – Invite Reviewers

The list is divided in two main tabs, the one displaying results from the pool of OpenScienceLink platform registered users and the other one displaying results from the pool of PubMed/MEDLINE Authors. In each case, the list displays the Reviewer Name and Affiliation, as well as their Homepage and OpenScienceLink profile rating (if registered, in the case of PubMed/MEDLINE Authors). It further notifies the user whether a valid reviewer’s email addresses was found or not, which shall be used for notifying them in case they are selected and invited. Vicky selects the “PubMed/MEDLINE Authors” tab and then checks two candidate reviewers from the list by using the checkbox provided next to their name, and clicking the “Invite Reviewers” button on the bottom of the list. The Platform then guides her through a process for sending out personalised invitation emails to each of the selected reviewers (Figure 26). She edits the default invitation message for the first reviewer and clicks the “Invite this

Reviewer” button. The Platform submits the first invitation and prompts her to invite the next
Editor Activities - Invite Reviewers

Venue
 Review Deadline Tue Mar 08 12:21:38 CET 2016
 Title **My first dataset**
 Abstract Heart disease experiment thyroid hormone on mice
 Authors Myfirstname Mysurname
 Keywords Heart Diseases
 Thyroid Hormones
 Thyroid Gland
 Thyroid Diseases

Find Potential Reviewers

Heart Diseases
 Thyroid Hormones
 Thyroid Gland
 Thyroid Diseases

| OSL Users | PubMed/MEDLINE Authors | | | | | |
|-------------------------------------|------------------------|-------------|--|-------------|----------|--|
| Page 1 2 3 ... 992 | | | | | | |
| Reviewer Name | E-Mail | Affiliation | Homepage | OSL Profile | Keywords | |
| <input type="checkbox"/> | Klein I | yes | Department of Medicine, North Shore University Hospital, Manhasset, New York 11030. | | | |
| <input type="checkbox"/> | Cokkinos D | yes | Cardiology Department, Tzanio State Hospital, Athens, Greece. | | | |
| <input checked="" type="checkbox"/> | Iervasi G | yes | CNR Institute of Clinical Physiology, Pisa, Italy. | | ★★★★★ | |
| <input type="checkbox"/> | Franklyn J | yes | Department of Endocrinology, Queen Elizabeth Hospital, Birmingham. | | | |
| <input checked="" type="checkbox"/> | Pantos C | yes | Onassis Cardiac Surgery Center, Athens, Greece. | | | |
| <input type="checkbox"/> | Goldman S | yes | Department of Internal Medicine, Tucson Veterans Administration Medical Center, Arizona 85723. | | | |
| <input type="checkbox"/> | Morkin E | yes | University Heart Center, University of Arizona College of Medicine, Tucson 85724. | | | |
| <input type="checkbox"/> | Gerdes A | yes | Department of Basic Biomedical Sciences, Sanford School of Medicine, University of South Dakota, Vermillion, South Dakota; Department of Biomedical Sciences, New York Institute of Technology-College of Osteopathic Medicine, Old Westbury, New York; and University of Pisa, Dipartimento di Scienze dell'Uomo e dell'Ambiente, University of Pisa, Pisa, Italy. Department of Biomedical Sciences, New York Institute of Technology-College of Osteopathic Medicine, Old Westbury, New York; and . | | | |
| <input type="checkbox"/> | Martino E | yes | Patologia Medica II, Università di Pisa, Italy. | | | |
| Page 1 2 3 ... 992 | | | | | | |

reviewer.

Figure 25: Editor Activities – Find Potential Reviewers

Editor Activities - Invite Reviewers

Venue
 Review Deadline Tue Mar 08 12:21:38 CET 2016
 Title My first dataset
 Abstract Heart disease experiment thyroid hormone on mice
 Authors Myfirstname Mysurname
 Keywords Heart Diseases
 Thyroid Hormones
 Thyroid Gland
 Thyroid Diseases
 Article Print [Download](#)

Invite Reviewers

Already invited:

No reviewer invited.

Invite Next Reviewer

Reviewer's Name:

Reviewer's E-mail Address:

Invitation Message:

Ms. Ref. No.: 521

Title: My first dataset

Biomedical Data Journal

Dear Dr. Costas,

We would like to invite you to review a manuscript and dataset that have been submitted for publication in the Biomedical Data Journal, Standing Call. The abstract and complete author list appear at the end of this message.

If you accept this invitation, I would be very grateful if you would return your review by 2016-03-08.

Figure 26: Editor Activities – Invite Next Reviewer

After inviting both reviewers Vicky is redirected back to the Editor Activities – Invite Reviewers page, where she is now presented with the list of selected reviewers (Figure 27). In this page she can now manage the review invitations and the submitted reviews, by clicking the provided icons as follows: 1) the clipboard icon allows her to view the dataset or article evaluation (review), once it has been submitted by the reviewer, 2) the envelope icon allows her to resend a reminder of the invitation to the candidate reviewer (Figure 28), and 3) the red X icon to delete the review invitation after providing confirmation (Figure 29). Vicky decides to delete the second reviewer, who is notified with a relevant email message (Figure 30). She is automatically redirected to the Editor Activities – Invite Reviewers page, where she clicks on the “Back” button and is redirected to the Editor Activities – Datasets Submitted to Issue page (Figure 31). There, she sees that the status of “My first dataset” has changed from “Submitted” to “Under review” and she can no longer delete the review call.

View Reviewer Invitation

Call/Issue: Standing Call
 Review Deadline: Tue Mar 08 12:21:38 CET 2016
 Title: My first dataset
 Abstract: Heart disease experiment thyroid hormone on mice
 Authors: Myfirstname Mysurname
 Keywords/Tags: Heart Diseases
 Thyroid Hormones
 Thyroid Gland
 Thyroid Diseases

| Reviewer | Venue Title | Due Date | Article Title | Status | Recomm. | Operations |
|--|---------------|------------|------------------|---------|---------|------------|
| Dr. Costas <reviewer1@opensciencelink.org> | Standing Call | 2016-03-08 | My first dataset | Invited | | |
| Iervasi, G <reviewer2@opensciencelink.org> | Standing Call | 2016-03-08 | My first dataset | Invited | | |

Figure 27: Editor Activities – Invite Reviewers populated

View Reviewer Invitation

Call/Issue: Standing Call
 Review Deadline: Tue Mar 08 12:21:38 CET 2016
 Title: My first dataset
 Abstract: Heart disease experiment thyroid hormone on mice
 Authors: Myfirstname Mysurname
 Keywords/Tags: Heart Diseases
 Thyroid Hormones
 Thyroid Gland
 Thyroid Diseases

The following reminder will be sent:

From: vicky@opensciencelink.org
 To: reviewer1@opensciencelink.org
 Subject: Friendly reminder

Dear Reviewer,

This is a friendly reminder to decide whether you agree to review the following submission:

My first dataset

Thank you in advance for your collaboration.

Regards,

Vicky

Figure 28: Editor Activities – Invite Reviewers – Reminder

View Reviewer Invitation

Call/Issue: Standing Call
 Review Deadline: Tue Mar 08 12:21:38 CET 2016
 Title: My first dataset
 Abstract: Heart disease experiment thyroid hormone on mice
 Authors: Myfirstname Mysurname
 Keywords/Tags: Heart Diseases
 Thyroid Hormones
 Thyroid Gland
 Thyroid Diseases

The following notification will be sent:

From: vicky@opensciencelink.org
 To: reviewer2@opensciencelink.org
 Subject: Friendly notification


Dear Reviewer,
 This is a friendly notification to let you know that it is no longer required your review about the following submission:
 My first dataset
 Regards,
 Vicky

Cancel (do not delete)

Delete

Figure 29: Editor Activities – Invite Reviewers – Delete Invitation

Friendly notification

 info@opensciencelink.eu
 to me ▾

Dear Reviewer,

This is a friendly notification to let you know that it is no longer required your review about the following submission:








My first dataset

Regards,
 Myfirstname Mylastname

Figure 30: Reviewer email – No longer required to review

Datasets Submitted to Issue: Standing Call

Standing Call

| Dataset Name ^a | Article | Dataset | Dataset URL ^a | Status ^a | Issue ^a | DCI ^a | Last Update ^a | Operations |
|---------------------------|--------------------------|--------------------------|--------------------------|---------------------|--------------------|------------------|--------------------------|---|
| My first dataset | download | download | | Under review | Standing Call | | 2016-02-09 |     |
| My new dataset | download | download | | Submitted | Standing Call | | 2016-02-10 |    |

Go Back

Figure 31: Editor Activities – Datasets Submitted to Issue – Reviewers invited

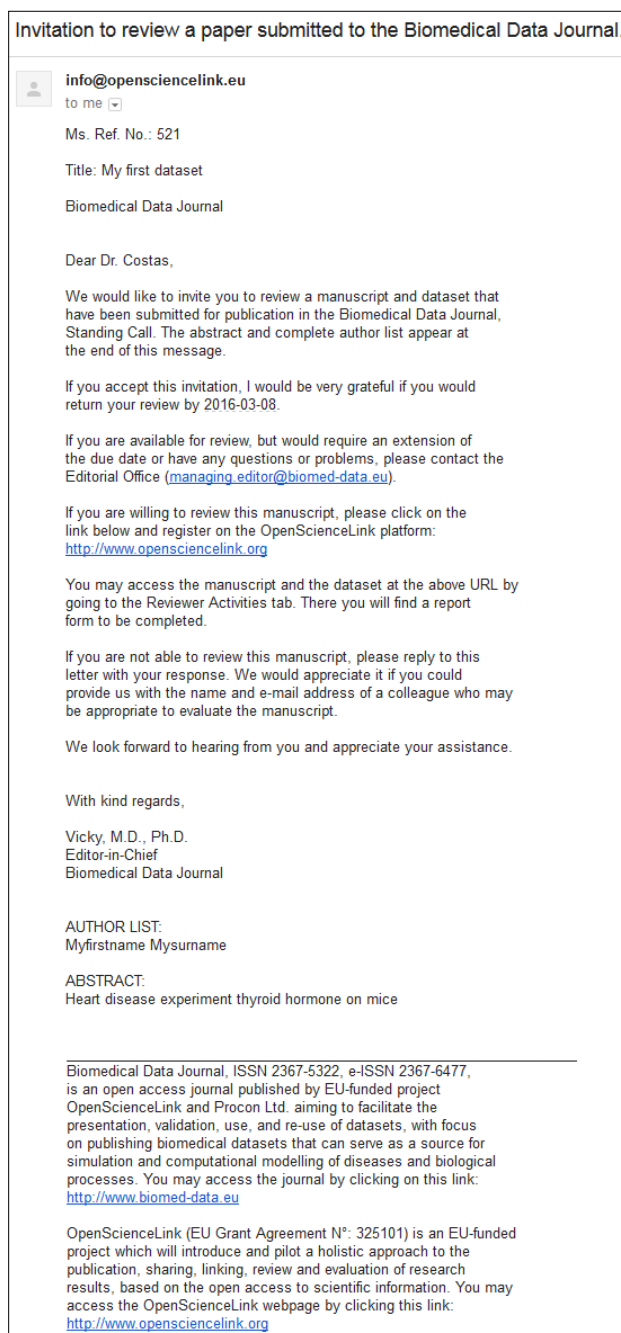


Figure 32: Reviewer email – Invitation to write a review

Costas, who is a researcher cardiologist, checks his mailbox and sees an email message from the OpenSciencelink Platform inviting him to review “My first dataset” (Figure 32). He clicks on the link provided in the email and is directed to the Platform Login, where he creates a new profile using his email address and becomes a registered user. Subsequently he logs in the Platform and, as per the email instructions he received, clicks the Reviewers Activities tab in the main menu and the Reviewers Activities - My Review Invitations page loads (Figure 33). On the page he is presented with a message prompting him to read the Ethical Responsibilities of reviewers before accepting to write a review. Costas clicks on the “Ethical Responsibilities of Reviewers” link and reads the relevant text in a pop-up browser window. In the My Review Invitations page, he is further presented with a list of all his review invitations (currently only the invitation for

“My first dataset” exists), including information regarding the title of the call and the article, the review deadline, the review status and reviewer’s recommendation. For each invitation he can perform two operations by clicking on the respective icons: 1) The clipboard-with-green-plus-sign icon allows him to accept the review invitation, 2) the clipboard-with-red-X icon to reject the invitation.

Reviewer Activities - My Review Invitations

Before accepting to write a review, please read the [Ethical Responsibilities of Reviewers](#).



| Reviewer | Venue Title | Due Date | Article Title | Status | Recomm. | Operations |
|--------------------------------------|---------------|------------|------------------|---------|---------|---|
| Dr. Costas <reviewer@opencielink.eu> | Standing Call | 2016-03-08 | My first dataset | Invited | |   |

Figure 33: Reviewer Activities – My Review Invitations

Costas would like to review the “My first dataset” dataset and accompanying article, hence clicks on the first icon to accept the invitation. He is immediately redirected to a confirmation page (Figure 34), where he verifies his choice by clicking the “Agree” button. He is then redirected back to the Reviewer Activities – My Review Invitations page (Figure 35), where he is now presented with a new available operation: 3) The pencil-on-paper icon, which allows him to edit and submit the review. At the same time he notices that the status of the invitation has been changed to “Agreed”. Vicky, the issue’s editor, has also received an email message (Figure 36) informing her that Costas has agreed to review “My first dataset”.

Reviewer Activities - My Review Invitations

Before accepting to write a review, please read the [Ethical Responsibilities of Reviewers](#).

Please, confirm that you agree to review this submission.

Figure 34: Reviewer Activities – Review invitation acceptance confirmation

Reviewer Activities - My Review Invitations

Before accepting to write a review, please read the [Ethical Responsibilities of Reviewers](#).


| Reviewer | Venue Title | Due Date | Article Title | Status | Recomm. | Operations |
|--------------------------------------|---------------|------------|------------------|--------|---------|---|
| Dr. Costas <reviewer@opencielink.eu> | Standing Call | 2016-03-08 | My first dataset | Agreed | |  |

Figure 35: Reviewer Activities – My Review Invitations – Invitation accepted



Figure 36: Editor email – Reviewer agreed to write review

On the Reviewer Activities – My review Invitations page (Figure 35) Costas clicks the appropriate icon to edit and submit the review and is redirected to the Submit Review page (Figure 37), where he downloads the dataset and article for review.

In order to search the available literature as well as the OpenScienceLink Platform for datasets and article which are relevant to the research topics of the “My first dataset”, Costas selects the Search tab from the main menu (**Error! Reference source not found.**) and the Search page is loaded.

After carefully studying the dataset and accompanying article, as well as the other retrieved documents, Costas he is ready to write a review by using the form on the Submit Review page (Figure 37). This form allows reviewers to rate the dataset and/or articles under review in a consistent manner. Costas is first asked to specify his overall recommendation for “My first dataset”, by choosing among four available answers (“Accept”, “Accept with minor revision”, “Accept with major revision”, “Reject”). Since he thinks that the work is really good, but only requires some improvements in terms of language used, he decides to accept it with minor revision. He then answers the rest of questions displayed in the page, in order to provide his more detailed evaluation regarding the various parameters of the scientific work. In the case of a dataset, these questions refer to the methodology, authors’ previous publications, missing data, number of subjects, number of variables, insights on dataset usage, language, references, ethical issues, etc. After having provided their evaluation regarding these parameters, the reviewers can optionally provide in free text their opinion about the strengths of the work and their main concerns, and finally leave some feedback to the editor. Costas also fills in these areas with short texts and then clicks “Save Changes”. He is redirected to the Submit Review – Confirm page (Figure 38), where he is presented with a summary of his review. He clicks “Confirm Review” and the Review Submitted page appears. Vicky, the issue editor, receives an email notifying her that the Costas has submitted the review (Figure 40).

Costas then clicks “Go to List” and is redirected back to the Reviewer Activities – My Review Invitations page (Figure 41), where he notices that the status of the invitation has changed to “Finished”, and the Recommendation has been updated to “Accept with minor revision”. By clicking the clipboard icon he is presented with the summary of the review (Figure 42).

Submit Review

User: **Myfirstname Mysurname**

Name: My first dataset

Description: Heart disease experiment thyroid hormone on mice

Article path: [download](#)

Dataset path: [download](#)

URL:

Recommendation

Is the description of the methodology used detailed enough?

Have the authors previous publications based on the same methodologies described in the submitted work?

Are there missing data in the submitted dataset?

The number of subjects in the submitted dataset is

The number of variables measured per subject in the submitted dataset is considered

Do the authors provide insights on how these datasets could be potentially used for computational modeling?

Language

List of references

Are there ethical issues concerning the submitted work?

Strengths (Optional)

Very important data regarding myocardial infarction, which could be exploited in a broad range of applications.

Concerns (Optional)

I have no concerns regarding this dataset.

Comments To Editor (Optional)

I think that this is very important work and should be published as a lead article in the next issue of the data journal.

Figure 37: Reviewer Activities – Submit Review

Submit Review

Before writing the review, please read the [Ethical Responsibilities of Reviewers](#).

Name: My first dataset
 Description: Heart disease experiment thyroid hormone on mice
 Article path: [download](#)
 Dataset path: [download](#)
 URL:

The description of the methodology used is detailed enough.
 The authors have several previous publications based on the same methodologies described in the submitted work.
 There are no missing data.
 The number of subjects in the submitted dataset is enough in relation to the described population.
 The number of variables measured per subject in the submitted dataset is considered enough to describe this population.

Comments To Author: The authors provide insights on how these datasets could be potentially used for computational modeling.
 The language requires some corrections.
 The list of references has a correct format and an appropriate number of references.
 There are ethical issues concerning the submitted work.
 Strengths:
 Very important data regarding myocardial infarction, which could be exploited in a broad range of applications.
 Concerns:
 I have no concerns regarding this dataset.

Comments To Editor: I think that this is very important work and should be published as a lead article in the next issue of the data journal.
 Recommendation: Accept with minor revision

Please, confirm your review.

Figure 38: Reviewer Activities – Submit Review – Confirmation

Submit Review

Before writing the review, please read the [Ethical Responsibilities of Reviewers](#).

Review Submitted

The form has been submitted successfully.

Figure 39: Reviewer Activities – Review Submitted

[OpenScienceLink] Review submitted
 info@opensciencelink.eu
 Sent: Τρί 9/2/2016 5:21 μμ
 To: editor@opensciencelink.org

Dear Editor,

Dr. Costas <reviewer@opensciencelink.org> has written a review on:

My first dataset
 Myfirstname Mysurname

in issue: Standing Call

For more information, please visit <http://www.opensciencelink.org> .

This is an automatic message sent by the OpenScienceLink notification system.

Figure 40: Editor email – Reviewer submitted review

Reviewer Activities - My Review Invitations

Before accepting to write a review, please read the [Ethical Responsibilities of Reviewers](#).

| Reviewer | Venue Title | Due Date | Article Title | Status | Recomm. | Operations |
|---|---------------|------------|------------------|----------|----------------------------|------------|
| Dr. Costas < reviewer@opensciencelink.eu> | Standing Call | 2016-03-08 | My first dataset | Finished | Accept with minor revision | |

Figure 41: Reviewer Activities – My Review Invitations – Review finished

View Review Information

| | |
|---------------------|--|
| User: | Myfirstname Mysurname |
| Name: | My first dataset |
| Description: | Heart disease experiment thyroid hormone on mice |
| Article path: | download |
| Dataset path: | download |
| URL: | |
| Comments To Author: | <p>The description of the methodology used is detailed enough. The authors have several previous publications based on the same methodologies described in the submitted work. There are no missing data. The number of subjects in the submitted dataset is enough in relation to the described population. The number of variables measured per subject in the submitted dataset is considered enough to describe this population.</p> <p>The authors provide insights on how these datasets could be potentially used for computational modeling. The language requires some corrections. The list of references has a correct format and an appropriate number of references. There are ethical issues concerning the submitted work.</p> <p>Strengths: Very important data regarding myocardial infarction, which could be exploited in a broad range of applications.</p> <p>Concerns: I have no concerns regarding this dataset.</p> |
| Comments To Editor: | I think that this is very important work and should be published as a lead article in the next issue of the data journal. |
| Recommendation: | Accept with minor revision |

[Go Back](#)

Figure 42: Editor Activities - View Review Information populated

Vicky, the issue editor, logs in the Platform in order to see the progress of the review process, as well as an overview of the recommendations by each reviewer. In the main menu she clicks the Editor Activities tab, then on the Editor Activities – Available Issues page (Figure 4) she clicks “View datasets submitted for this issue”. In the Datasets Submitted to Issue page (Figure 43) she clicks on the clipboard icon for “My first dataset” and is redirected to the View Reviewer Invitation page for the dataset, which is now populated with the details of all review invitations for the dataset (Figure 44). Vicky can see that Costas has reviewed “My first dataset” and accepted it with minor revision. She clicks the clipboard icon and is further presented with the detailed review of the reviewer, which looks exactly as in Figure 42.

In the View Reviewer Invitation page for “My first dataset” (Figure 44), where she can see the status of all submitted reviews for this dataset, Vicky now clicks on the stats button and is redirected to the Rate reviewer page (Figure 45) in order to rate Costas as a reviewer in a scale from 1 to 5 stars. She thinks that Costas did a fairly good job reviewing the dataset and decides to give him 4 stars. She clicks the “Submit” button and her rating is stored in the Platform. She cannot rate Costas again for the same review.

Datasets Submitted to Issue: Standing Call

Standing Call

| Dataset Name | Article | Dataset | Dataset URL | Status | Issue | DCI | Last Update | Operations |
|------------------|--------------------------|--------------------------|-------------|-----------|---------------|-----|-------------|------------|
| My first dataset | download | download | | Reviewed | Standing Call | | 2016-02-10 | |
| My new dataset | download | download | | Submitted | Standing Call | | 2016-02-10 | |

[Go Back](#)

Figure 43: Editor Activities – Datasets Submitted to Issue – Dataset reviewed

Editor Activities - Invite Reviewers

Call/Issue: Standing Call
 Review Deadline:
 Title: My first dataset
 Abstract: Heart disease experiment thyroid hormone on mice
 Authors: Myfirstname Mysurname
 Keywords/Tags: Heart Diseases
 Thyroid Hormones
 Thyroid Gland
 Thyroid Diseases

| Reviewer | Venue Title | Due Date | Article Title | Status | Recomm. | Operations |
|--|---------------|------------|------------------|----------|----------------------------|------------|
| Dr. Costas < karanastasis@gmail.com > | Standing Call | 2016-03-08 | My first dataset | Finished | Accept with minor revision | |

[Select Reviewers](#)

[Write Final Review](#)

Figure 44: Editor Activities – View Reviewer Invitation - Dataset reviewed

View Reviewer Invitation

Call/Issue: Standing Call
 Review Deadline: Tue Mar 08 12:21:38 CET 2016
 Title: My first dataset
 Abstract: Heart disease experiment thyroid hormone on mice
 Authors: Myfirstname Mysurname
 Keywords/Tags: Heart Diseases
 Thyroid Hormones
 Thyroid Gland
 Thyroid Diseases

Please give a score to the following reviewer:

Reviewer: Dr. Costas
 E-mail address: reviewer1@opensciencelink.org
 Score (1:worst, 5:best):

[Cancel](#)

[Submit](#)

Figure 45: Editor Activities – View Reviewer Invitation – Rate reviewer

Vicky only wants to test the Platform, and does not need any further reviews on “My first dataset”. Hence, back in the View Reviewer Invitation page for “My first dataset” (Figure 44), she clicks on the “Write Final Review” button and is redirected to the Editor Activities – Write Final Review page (Figure 46). The Platform generates an editable email message to be sent to the dataset’s author, which includes a summary of each reviewer’s comments automatically verbalised. Based on her opinion on the dataset and the reviewers’ evaluations, Vicky decides to accept it with minor revision. Hence, from the drop-down menu she selects “Accept with minor revision” and clicks on the “Save changes” button. A confirmation page (Figure 47) is presented by the platform, where Vicky can now see the final message text including her own recommendation. She clicks on the “Confirm Review” button.

Editor Activities - Invite Reviewers

Name: My first dataset
 Description: Heart disease experiment thyroid hormone on mice
 Article path: [download](#)
 Dataset path: [download](#)
 URL:

Comments To Author:

Dear Myfirstname Mysurname,

Thank you very much for your submission:

My first dataset

Your submission has been reviewed.
 You will find the reviews below.

Regards,
 Myfirstname Mylastname

----- REVIEW 1 -----
 Recommendation: Accept with minor revision

The description of the methodology used is detailed enough.
 The authors have several previous publications based on the
 same methodologies described in the submitted work.
 There are no missing data.
 The number of subjects in the submitted dataset is enough in
 relation to the described population.
 The number of variables measured per subject in the submitted
 dataset is considered enough to describe this population.

Recommendation:

Figure 46: Editor Activities – Write Final Review

Vicky navigates back to the Editor Activities – Datasets Submitted to Issue page (Figure 48). There, she can see that the Status of “My first dataset” has been changed to “Reviewed” and she is now able to publish the dataset by giving it a Digital Object Identifier (DOI). She clicks on the relevant operation button and is redirected to the Editor Activities – Edit Digital Object Identifier (DOI) page (Figure 49). There, she types a DOI for “My first dataset” and clicks on the “Save Changes” button. The dataset is now published to the OpenScienceLink platform, searchable and available to all platform users.

Editor Activities - Invite Reviewers

Name: My first dataset
 Description: Heart disease experiment thyroid hormone on mice
 Article path: [download](#)
 Dataset path: [download](#)
 URL:

Dear Myfirstname Mysurname,

Thank you very much for your submission:

My first dataset

Your submission has been reviewed.
 You will find the reviews below.

Regards,
 Myfirstname Mylastname

----- REVIEW 1 -----

Recommendation: Accept with minor revision

Comments To
 Author:

The description of the methodology used is detailed enough.
 The authors have several previous publications based on the same methodologies described in the submitted work.
 There are no missing data.
 The number of subjects in the submitted dataset is enough in relation to the described population.
 The number of variables measured per subject in the submitted dataset is considered enough to describe this population.
 The authors provide insights on how these datasets could be potentially used for computational modeling.
 The language requires some corrections.
 The list of references has a correct format and an appropriate number of references.
 There are ethical issues concerning the submitted work.
 Strengths:
 Very important data regarding myocardial infarction, which could be exploited in a broad range of applications.
 Concerns:
 I have no concerns regarding this dataset.

----- FINAL REVIEW -----

Recommendation: Accept with minor revision









Recommendation: Accept with minor revision

Please, confirm your review.

Figure 47: Editor Activities – Write Final Review – Confirmation

Datasets Submitted to Issue: Standing Call

Standing Call

| Dataset Name | Article | Dataset | Dataset URL | Status | Issue | DOI | Last Update | Operations |
|------------------|--------------------------|--------------------------|-------------|-----------|---------------|-----|-------------|---|
| My first dataset | download | download | | Reviewed | Standing Call | | 2016-02-10 |     |
| My new dataset | download | download | | Submitted | Standing Call | | 2016-02-10 |     |

[Go Back](#)

Figure 48: Editor Activities – Datasets Submitted to Issue – Review finished

Edit Digital Object Identifier (DOI)

Owner: Myfirstname Mysurname

Affiliation: MyAffiliation, Greece.

Dataset Name: My first dataset

Description: Heart disease experiment thyroid hormone on mice

Call/Issue Name: Standing Call

Main Topics: ["Heart Diseases"[mesh], "Thyroid Hormones"[mesh], "Thyroid Gland"[mesh], "Thyroid Diseases"[mesh]]

Minor Topics: [Mice[mesh]]

Papers where the dataset has been used:

Category: Research data

Cover letter:

Article: [download](#) [original](#)

Dataset: [download](#) [original](#)

or URL provided:

Received: 2016-02-09

Revised: 2016-02-10

Accepted: 2016-02-10

License: [CC BY-NC-SA 4.0](#)

DOI of article

doi: 10.11610/bmdj.00001

DOI of dataset

doi: 10.11610/bmdj.data.00001

[Cancel Changes](#) [Save Changes](#)

Figure 49: Editor Activities – Edit Digital Object Identifier (DOI)

2.3 Pilot 3 Operations

Table 3 below presents the Pilot 3 functionalities, among the ones identified in deliverable D3.1 Rev 2 that were implemented at the third iteration of the OpenScienceLink Platform, along with the relevant Pilot requirements as elicited in deliverable D2.1 Rev 2.

| F-ID | Functionality | Relevant Pilot requirements IDs |
|-------|---------------------------------|---|
| F3.1 | Trend detection | F_PR3.1, F_PR3.4, F_PR3.6, F_PR3.7, F_PR3.8 |
| F3.2u | Trend analysis and presentation | F_PR3.2, F_PR3.4, F_PR3.6, F_PR3.7, F_PR3.9, F_PR3.10, F_PR3.11, F_PR3.12, F_PR3.13, F_PR3.14 |

Table 3: Pilot 3 functionalities implemented

Scenario of use

Vicky wishes to assess trend information regarding a specific research topic that she is interested in. She selects the Trends tab from the menu, which loads the Trends page. In the provided search field, Vicky specifies the term that she is interested in, namely “Endosome”. She starts typing a word and the Platform proposes auto-completion options for her text, based on relevant terms stemming from the ontology (Mesh). She can also specify any combination of keywords (Mesh or not) to search the trends for.

She then clicks on the “Show trend graph” button and the Platform starts processing the provided keyword(s).

Show Trend Graph



Figure 50: Trend search

The Platform analyses the underlying data sources and a few seconds thereafter the trend search results are retrieved and displayed on the same page, in a user-friendly graphical manner (Figure 51).

The graph presents the number of published articles dealing with the specific scientific topics per year, arranged in chronological order, which also includes an estimated number for the current year. It also shows the relative research interest per year. These values are used in order to create a sweep, which is then smoothed. From the form of the sweep, Vicky can make some presumptions regarding the trendiness of the specific research topic.

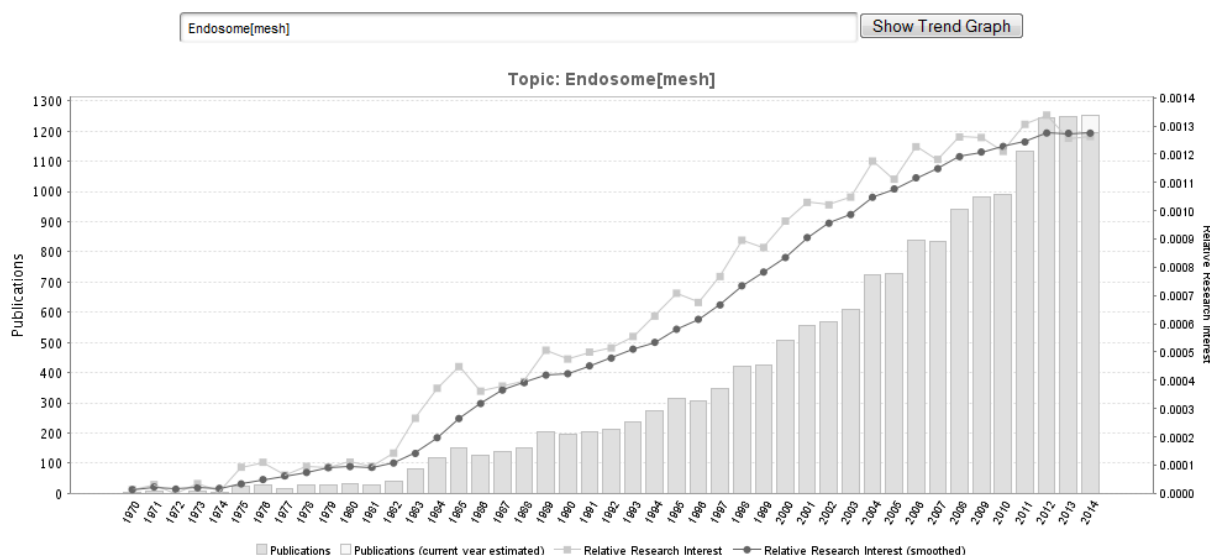


Figure 51: Trend search results

2.4 Pilot 4 Operations

This Pilot aims at assisting the networking and collaboration of researchers and scholars working on similar scientific fields. It facilitates the creation and tracking of networks of researchers. However, a key distinguishing characteristic of this Pilot from conventional research information systems is the ability to infer relationships between researchers and research groups, including non-obvious, non-declared relationships.

Scenario of use

A researcher logs in the Platform in order to identify researchers working on similar fields or sharing similar interests. Identification of network of researchers based on expertise and/or interest could be useful to establish new collaborations, define partners in grant proposals or organize lectures in congresses and meetings. After specifying his/her fields of interest and expertise, the Platform provides a list of suggested researchers for potential collaboration. Alternatively, without specifying fields of interest, the Platform infers the fields based on the publications of the user and provides the list of suggested researchers.

A user wishes further to identify research groups or laboratories interested in other scientific areas and fields in order to possibly expand his research or organize a workshop. In this case, the researcher specifies his field of interest to be taken into account manually and the Platform provides a list of the top authors in this field. The results are presented along with their relevant data, and the researcher can filter and sort the results based on these data and according to their personal preferences (e.g. relevance to the subfields, excellence in the field, location, affiliation, date). The results are also presented in the form of a network, where connections between different researchers are provided.

The suggested collaborations among researchers are on the basis of the degree of relevance of the research topics and fields they work on, as indicated across their published work and/or their participation in research communities. The researcher can request for receiving regular notifications about suggestions of scientific collaborations with researchers, research groups and/or communities via e-mail.

The operations referring to pilot 4 that were improved are listed in the following table:

| Operation | Description |
|---|--|
| Improvement of the visual interface. | This is mainly concerning the initial query and the case when no results are found. |
| Integration of counter to measure the number of collaboration searches. | A counter that measures the number of collaboration searches performed by each user. |

Table 4: Pilot 4 functionalities implemented.

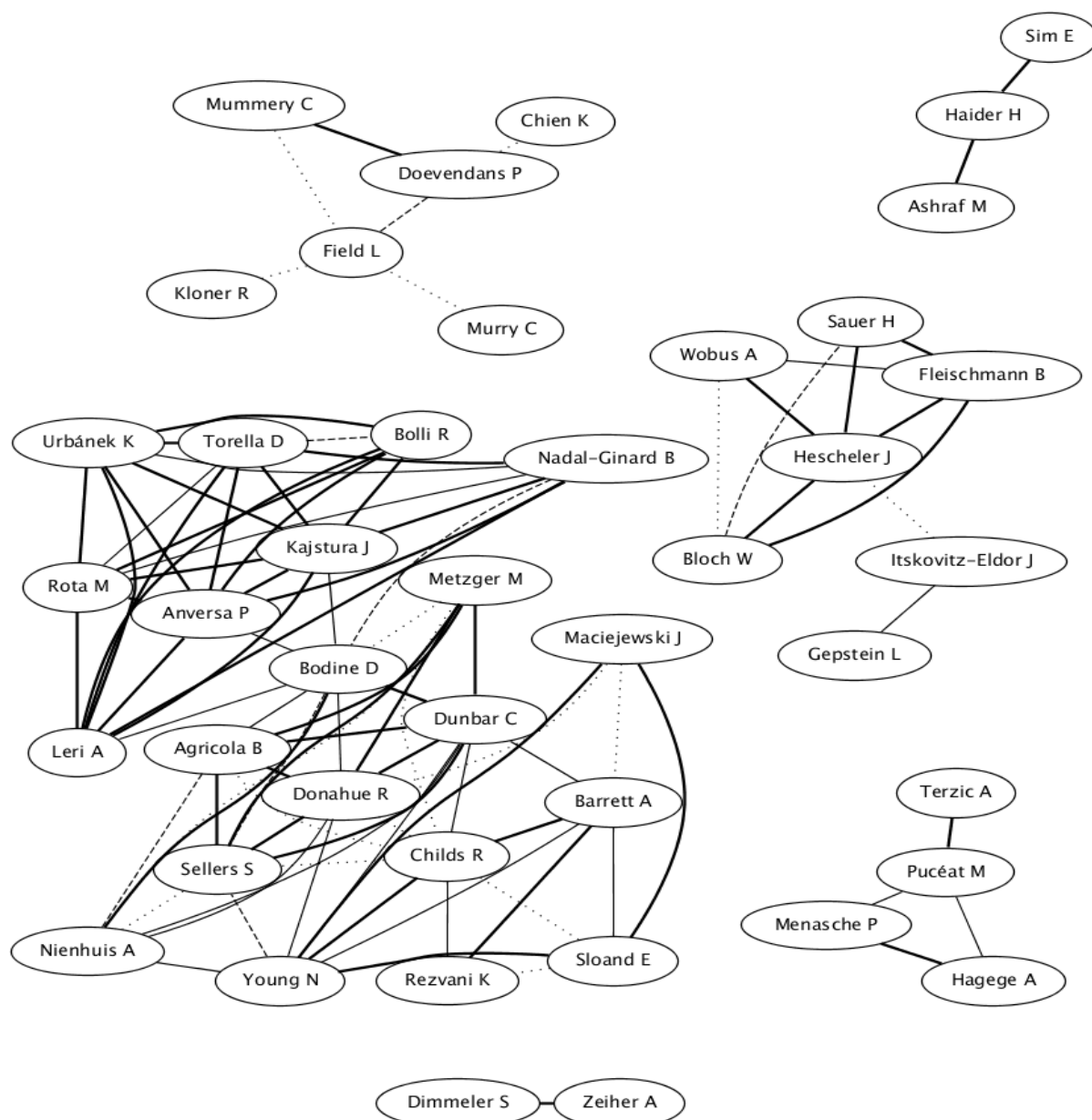


Figure 52: Network of top authors for the field "stem cells and heart"

2.5 Pilot 5 Operations

Table 5 below presents the Pilot 5 functionalities, among the ones identified in deliverable D3.1 Rev 2 that were implemented at the third iteration of the OpenScienceLink Platform, along with the relevant Pilot requirements as elicited in deliverable D2.1 Rev 2.

| F-ID | Functionality | Relevant Pilot requirements IDs |
|-------|-------------------------------|--|
| F5.7 | Researcher evaluation | F_PR5.1u, F_PR5.5, F_PR5.6, F_PR5.7, F_PR5.8, F_PR5.9, F_PR5.11, F_PR5.13, F_PR5.20 |
| F5.10 | Journal evaluation | F_PR5.1u, F_PR5.5, F_PR5.6, F_PR5.7, F_PR5.8, F_PR5.10, F_PR5.11, F_PR5.13, F_PR5.20 |
| F5.13 | Country evaluation per domain | F_PR5.4, F_PR5.5, F_PR5.6, F_PR5.13, |

Table 5: Pilot 5 functionalities implemented

Scenario of use

Margaret selects the Evaluation tab from the menu, which loads the Evaluation page (Figure 54). In the provided search field, Margaret specifies again a research term that she is interested in, namely “Triiodothyronine[mesh]”.

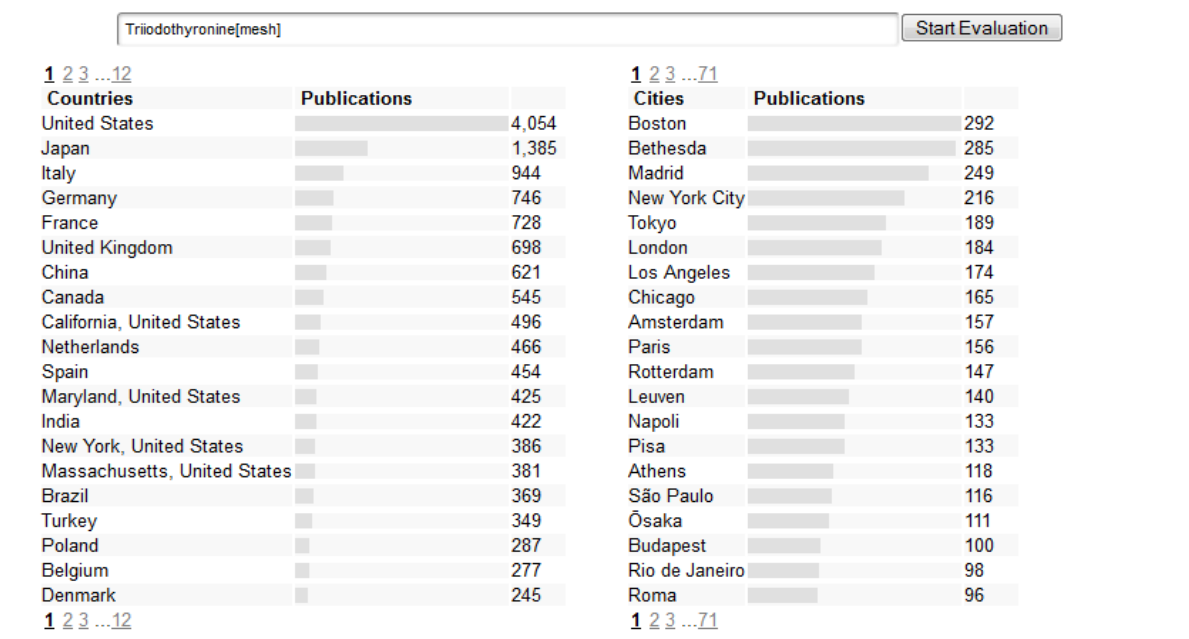


Figure 53: Evaluation search results – Countries and Cities

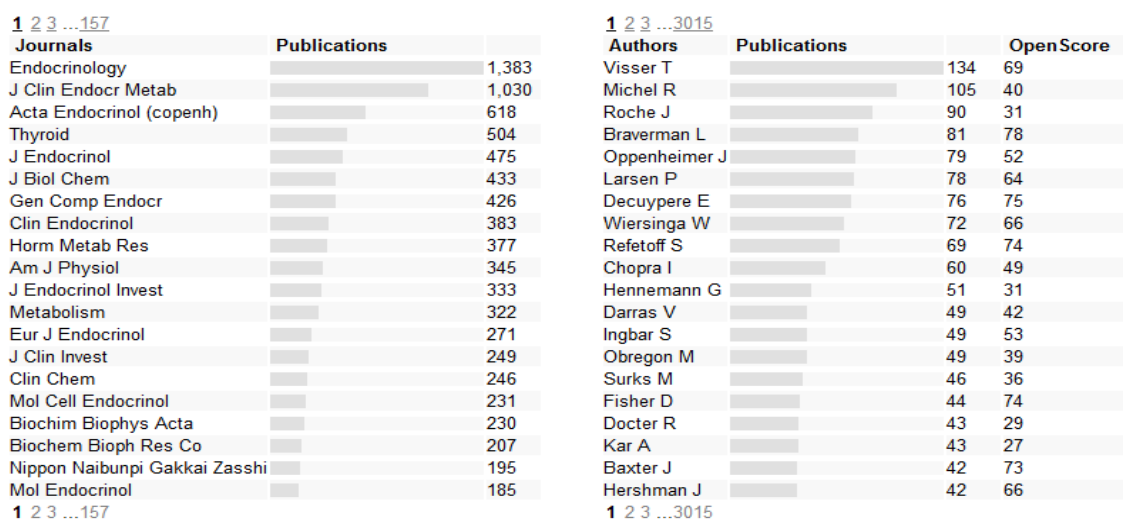


Figure 54: Evaluation search results – Journals and Authors

She starts typing a word and the Platform proposes auto-completion options for her text, based on relevant terms stemming from the ontology (Mesh). She can specify any combination of keywords (Mesh or not).

She then clicks the “Start Evaluation” button and the Platform starts processing the available publications. After a few seconds, Margaret is presented with the top Countries, Cities, Journals and Authors for the given scientific term(s). The results are presented in a graphical manner as bar charts, and are displayed in descending order. Next to each bar the corresponding numerical value is presented. Margaret can immediately assess the information regarding the most active countries and cities for the specific scientific topic(s), as well as the most relevant journals, and most active authors.

Next to the entry for each author she can further see a number representing the OpenScore for that author. This an evaluation rating for the author as calculated by the Platform, based on a score produced by a supervised machine learning model that uses a set of 12 publicly available features. The model was trained on a development set of selected authors (10,000 authors). The selection was made using stratified sampling to include authors which cover a large spectrum of h-indexes. The h-indexes were computed for these authors for the purposes of training the model, from the ISI Web of Science citation services. Therefore, the model is trained to predict the impact of the research works of the authors, trained on h-indexes. The features that were used per author are: (1) number of papers, (2) number of distinct journals the author published at, (3) number of distinct MeSH terms annotating the author's work, (4) number of cumulative MeSH terms annotating the author's work, (5) number of MeSH trees covering the areas of the author's published work, (6) number of years since first paper was published, (7) number of years since last paper was published, (8) number of years the author had at least one paper published (active years), (9) distinct number of co-authors, (10) cumulative number of co-authors, (11) number of author's affiliations since the beginning of his/her career, and, (12) the author's PageRank score, computed on the co-authorship graph that is created from all PubMed indexed articles.



Figure 55: Evaluation map

The origin of the analysed publications is additionally visualised as red dots on a picture of the World map (Figure 55).

3 Conclusions

In this deliverable we presented the current outcomes of tasks T7.1-T7.4 in terms of the pilot operations implemented by the respective OpenScienceLink platform services. The report detailed the validation of the five main pilot scenarios of the project. In addition, it reflected the outcome of task T7.5 by illustrating the suggested improvements for the five pilot scenarios of the project, coupled with the respective rationale that led to these suggestions. As a result, the current document, along with D5.1.3, constitute the major documentation of the five pilot operations of the project and the respective OpenScienceLink platform services.

4 References

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