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Sustainability Plans

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Executive Summary

This report presents an updated, final description of the OpenScienceLink Consortium activities regarding the sustainability plans of the OpenScienceLink services and overall project. The OpenScienceLink sustainability plan includes both mid-term and long-term activities and aims at ensuring that sustainability objectives are met. Within this context, the plan and its related activities and expected and/or achieved results will be reported yearly through the respective deliverables with D9.4.3 being the final one.

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1.1 Open Access and Scientific Research

1.1.1 The overall open access landscape

A growth trend has been observed for the open access (OA) publication market over the past years. According to Laakso et al [1] open access publications production has increased more than 10 times within the past decade both in terms of articles and journals. In fact, their study indicates that OA is already in its consolidation period. Numbers are quite indicative. The directory of open access journals (DOAJ) [2] already includes more than 9800 journals and 1.5 million articles published from over 120 countries. OpenDOAR (Directory of Open Access Repositories) [3] has more than 2500 repositories listed, ROAR (Registry of Open Access Repositories) [4] presents information about more than 2500 repositories, while the ROARMAP (Registry of Open Access Repositories Mandatory Archiving Policies) [5] includes more than 440 open access mandate policies. The Directory of Open Access Books (DOAB) [6] includes more than 1645 Academic peer-reviewed books from 55 publishers. Moreover, the BASE (Bielefeld Academic Search Engine) search engine [7] which focuses on academic open access web resources has already indexed more than 56 million documents and 2700 sources [8]. HighWire Press by Stanford University [9] comprises an archive of over 2.3 million free full-text provided articles. In the biomedical domain, in particular, PMC (PubMed Central) [10] has already indexed more than 734000 OA articles with more than 1200 journals providing their content with immediate free access and over 970 journals offering all of their articles openly accessible.

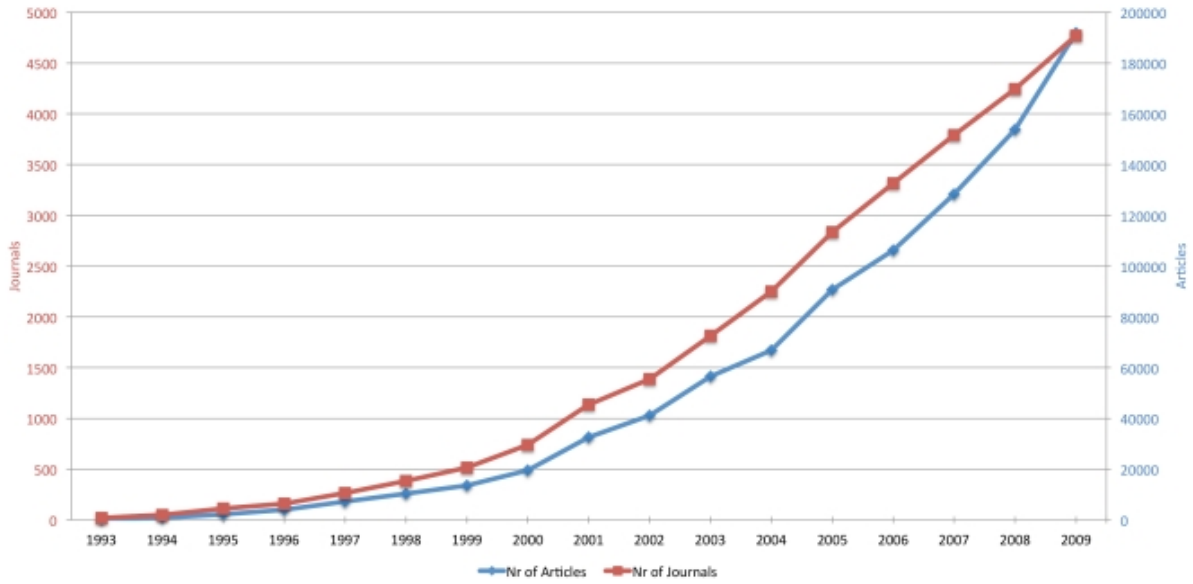

Figure 1: Open access publishing between 1993 and 2009 [11]

A study performed by Laakso et al [12] shows that although initially open access publishing has been flourishing in the world of universities and scientific societies, commercial publishers have become key actors on the OA scene, with an almost tenfold increase in the number of OA articles being published within a 6 years period (2005-2011).

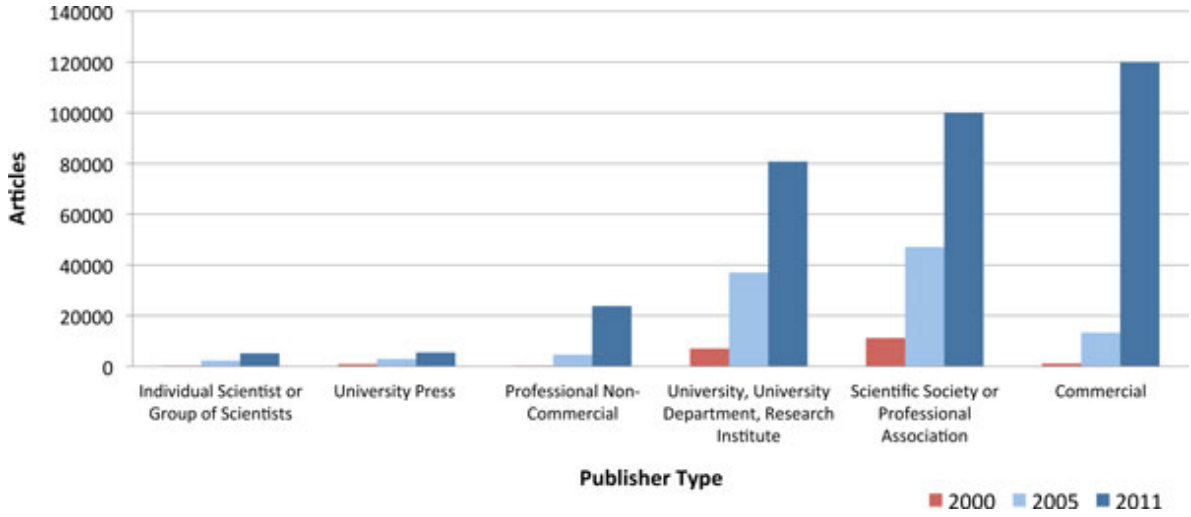

Figure 2: Different Publisher Types for Open Access Articles [13]

Given that profit comprises a fundamental concept in the commercial world and publication of research includes a series of costs, reconciliation of publishing fees for OA journals has been attempted through research and subscription funding. From this perspective, there are two main models for OA provision; green and gold OA [14]. In Green OA, scientists publish their findings through institutional or central repositories, or self-archiving (i.e., by placing their peer-reviewed post-prints on OA web pages). In fact, research institutions and funders, including the European Commission and Harvard, mandate their scientists to make their research findings publicly available in order to maximise the impact of the scientific work conducted. In Gold OA, publishing is done through OA journals, such as BioMed Central and PLoS, which may either allow publications for free or set a publishing fee to authors or their funders. Gradually more thorough classifications are introduced, such as diamond OA referring to publishing in journals which do not charge any fees to authors or readers [15]. Currently, one third of OA journals charge publishing fees, while others receive institutional, governmental, or third-party funding [16].

1.1.2 Open access and Biomedical Research

As presented in Figure 3, the volume of open access publications has tremendously increased for the major scientific disciplines, with the biomedicine domain showing a growth of more than 16 times in number of OA articles published between 2000 and 2011. In fact, according to a study in 2013, OA has shown tremendous growth in the biomedical field with more than 50% of OA articles coming for it [17].

One of the main topics for debate over OA publishing focuses on its assumed negative effect on the quality of scientific publishing. However, recent findings [18] show that OA journals, and in the medical and health domain in particular, which are indexed in Web of Science and/or Scopus and are published in the four largest publishing countries show the same scientific impact and quality with subscription journals. Interestingly, OA journals which pose article processing charges in order to fund publishing are on average cited more than other OA journals.

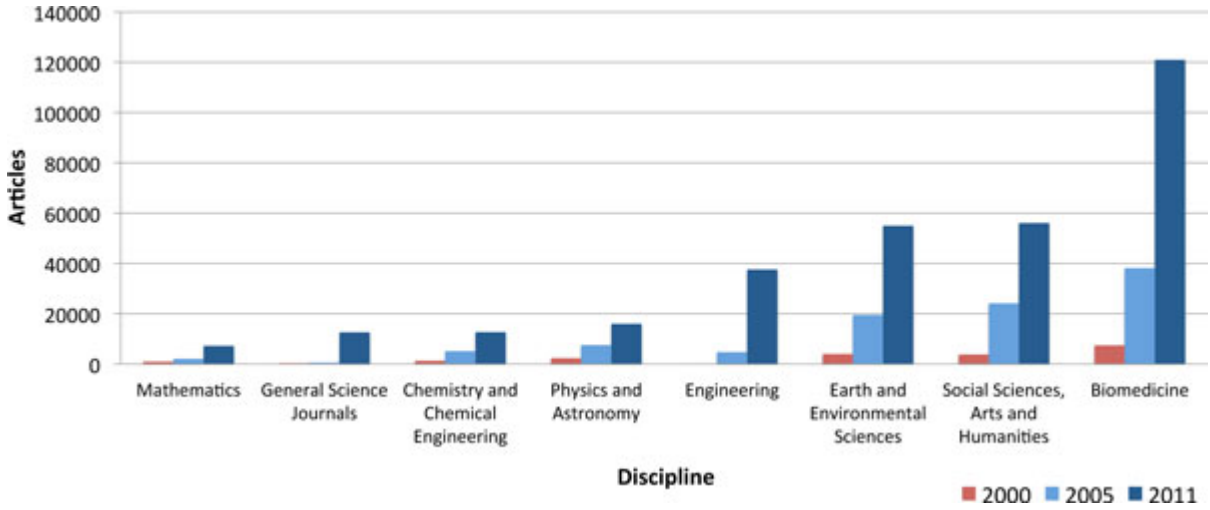

Figure 3: Open Access Articles across different disciplines [19]

1.2 Main players in the market

The following tables present an initial list of competitors for each OpenScienceLink pilot. Their purpose is to provide a first analysis of the competition regarding platforms and services which will also feed the exploitation strategy.

Pilot 1: Data journal development for publishing open access data sets

Competitor	Brief Description	Relation to OpenScienceLink
Scientific Data Journal (Nature Group)	It is a data journal to be published by Nature Publishing Group which currently focuses on datasets from the life, biomedical and environmental science communities, but is intended to cover a broad range of scientific disciplines. It launched officially in May 2014, although the first dataset was already published in March. Datasets are not hosted by the publisher. Instead community-recognised data repositories are expected to store them, if available, or other repositories such as the Dryad. http://www.nature.com/scientificdata/about/	Direct competitor, with focus on biomedical and life sciences
Data in Brief (Elsevier)	The journal "welcomes submissions that describe data from all research areas". It is indexed by DOAJ, Science Direct, and PubMed Central. It provides indication of impact via "Altmetrics", illustrating the engagement of social media communities with articles in Data in Brief based on the amount of activity from Twitter, Facebook, science blogs, mainstream news, and other sources captured by Altmetric.com for each publication in the last six months. Volume 1 has been published in December 2014 with 18 data papers. By September 2015 it has published four volumes (one volume per quarter: vol. 12 with 12; vol. 3 with 43; and vol. 43 with 102 data papers). About ¾ of all data papers are from the fields of Biochemistry, Genetics and Molecular Biology; Pharmacology, Toxicology and Pharmaceutical Science; Immunology and Microbiology. The article processing fee is 500 USD, with a 50 % discount by the end of 2015. http://www.journals.elsevier.com/data-in-brief/	Direct competitor, with substantial emphasis on biomedical and life sciences
Linked Open Data from	LODUM aims at connecting different data sources across the 15 faculties and departments at the University of Münster through	Potential content source

Competitor	Brief Description	Relation to OpenScienceLink
University of Münster (Germany) LODUM	the implementation of Open Access and Linked Open Data principles across the university. http://data.uni-muenster.de/	(As of June 2014, the biomedical domain does not appear to be covered in a substantial way)
OpenAire EU project	The FP7 project OpenAIRE aimed at offering the means to promote and realize the widespread adoption of the Open Access Policy by aggregating research publications which comprise European funded research output. OpenAIREplus, being its successor, further aims at linking this data to the accompanying research and project information, datasets and author information. Apart from the data, it also provides a series of functionalities such as statistics and reporting tools which can be useful to project managers. http://www.openaire.eu/	Potential Content source Planning to sign a MoU
re3data	It is a global registry of research data repositories from different academic disciplines which is funded by the German Research Foundation (DFG). By June 2014, it claimed to be "the most comprehensive registry of research data repositories with nearly 650 repositories represented worldwide." http://www.re3data.org/	Potential Content source
myExperiment	It comprises a public repository of scientific workflows which is currently supported by three European Commission 7th Framework Programme (FP7) projects: BioVeL, SCAP and the Wf4Ever Project and the e-Research SouthandmyGridEPSRC Platform grants. http://www.myexperiment.org/	Potential Content source
Open PHACTS	The Open PHACTS Discovery Platform integrates pharmacological data from a variety of information sources and offers tools and services for applying questions on this data with an aim to facilitate pharmacological research. http://www.openphacts.org	Potential Content source
Biodiversity Data Journal	The first issue of the *Biodiversity Data Journal*, featuring 27 articles, appeared in its final version in September 2013. BDJ is published by Pensoft Ltd., Bulgaria. http://biodiversitydatajournal.com	Potential Content source, if the OpenScienceLink domain broadens. Potential publisher and editor who could benefit from the data journal management and review services and additionally the trend mining and scientometrics services.
Geoscience Data Journal	The Geoscience Data Journal publishes online open access short data papers cross-linked to, and citing, datasets that have been deposited in approved data centres. As of June 2014, the journal has published 13 articles, one of which is an editorial paper [20], one data analysis paper and one comment paper. The journal is published by Wiley. http://onlinelibrary.wiley.com/journal/10.1002/%28ISSN%292049-6060	
Journal of Open Archaeology Data	The *Journal of Open Archaeology Data* is published by Ubiquity Press. It focuses on data papers describing archaeological datasets. The first volume with nine articles appeared in 2012. The second volume of 2013 has 2 articles, the third volume of 2014 has one article, as of June 2014. http://openarchaeologydata.metajnl.com	

Competitor	Brief Description	Relation to OpenScienceLink
Journal of Open Psychology Data	The *Journal of Open Psychology Data* is also published by Ubiquity Press It features peer-reviewed data papers describing the psychology datasets. By June 2014 the journal website provides access to six articles, one of which is the editorial article. http://openpsychologydata.metajnl.com	
Earth System Science Data	*Earth System Science Data* (ESSD) is an international, interdisciplinary journal for the publication of articles on original research data (sets), furthering the reuse of high-quality data of benefit to Earth system sciences. The editors encourage submissions on original data or data collections which are of sufficient quality and have potential to contribute to these aims. The journal maintains sections for regular-length articles, brief communications (e.g. on additions to data sets) and commentaries, as well as review articles and special issues. http://earth-system-science-data.net/	Potential publisher and editor who could benefit from the data journal management and review services and additionally the trend mining and scientometrics services.
Journal of Chemical and Engineering Data	The *Journal of Chemical & Engineering Data* is a monthly journal devoted to the publication of experimental data and the evaluation and prediction of property values. It is the only American Chemical Society journal primarily concerned with articles containing experimental data on the physical, thermodynamic, and transport properties of well defined materials including complex mixtures of known compositions and systems of environmental and biochemical interest. http://pubs.acs.org/journal/jceaax	
Journal of Physical and Chemical Research Data	The *Journal of Physical and Chemical Reference Data* is published by the American Institute of Physics (AIP) for the National Institute of Standards and Technology (NIST). The objective of the Journal is to provide critically evaluated physical and chemical property data, fully documented as to the original sources and the criteria used for evaluation, preferably with uncertainty analysis. Critical reviews of measurement techniques may also be included if they shed light on the accuracy of available data in a technical area. Papers reporting correlations of data or estimation methods are acceptable only if they are based on critical data evaluation and if they produce "reference data"—the best available values for the relevant properties. http://jpcrd.aip.org/	
International Journal of Robotics Research	A leading peer-reviewed journal in its field for more than two decades, the *International Journal of Robotics Research* (IJRR) was the first scholarly publication on robotics research. IJRR offers incisive and thought-provoking original research papers and articles, perceptive reviews, and lively editorials on ground-breaking trends issues, technical developments, and theories in robotics by the outstanding scholars and practitioners in the field. The Journal covers more than just narrow technical advances-it embraces a wide variety of topics. IJRR also publishes high quality, peer reviewed datasets and multimedia extensions alongside articles. This journal is a member of the Committee on Publication Ethics (COPE). http://ijr.sagepub.com/	
F1000 Research	*F1000Research* is an Open Science publishing platform offering immediate publication of posters, slides and articles with no	

Competitor	Brief Description	Relation to OpenScienceLink
	editorial bias. All articles benefit from transparent peer review and the inclusion of all source data. http://f1000research.com	
Ecological Archives - Data Papers	*Ecological Archives* publishes materials that are supplemental to articles that appear in the ESA journals (Ecology, Ecological Applications, Ecological Monographs, Ecosphere, Ecosystem Health and Sustainability and Bulletin of the Ecological Society of America), as well as peer-reviewed data papers with abstracts published in the printed journals. Ecological Archives is published in digital, Internet-accessible form. http://esapubs.org/archive/default.htm	
GigaScience	It is a journal which publishes 'big-data' studies from the entire spectrum of life and biomedical sciences. It is with BioMed Central and supported by BGI – a Chinese non-profit organisation which claims to be the largest genomics organisation. It is indexed in the Directory of Open Access Journals (DOAJ), PubMed and PubMed Central.	Potential Content source, Publisher and Editor potentially interested primarily in data journal management and review services and additionally in the trend mining and scientometrics services.
Genomics Data	It is an open access journal published by Elsevier which covers all aspects of genome-scale analysis, including nucleic acids analysis, microarray and next-gen sequencing data and all organisms.	
Journal of Open Public Health Data	It is a data journal which is published by Ubiquity Press. Its main focus is on data with reusability potential or which can be used for research validation purposes.	
EPJ Data Science	A SpringerOpen Journal aiming to promote data-driven science as a complementary approach to the traditional hypothesis-driven method. http://www.epjdatascience.com	Potential partner journal that may facilitate utilisation of OpenScienceLink products, including BMDJ publications
JAMIA - A scholarly journal of informatics in health and biomedicine [1]	Peer-reviewed journal for biomedical and health informatics, published by BDJ on behalf of the American Medical Informatics Association (AMIA) http://jamia.bmj.com Not open-access.	
Dataset Papers in Science	Dataset Papers in Science published by Hindawi is a peer reviewed, open access journal that publishes dataset papers in a wide range of scientific subjects including biology, medicine, neuroscience and pharmacology among many others. The website http://www.hindawi.com/journals/dpis/ claims an acceptance rate of 36%, average time between submission and final decision of 77 days and average time between acceptance and final publication of 131 days.	Direct competitor
[The] Data Science Journal	Journal of the Committee on Data for Science and Technology (CODATA) of the International Council for Science (ICSU). Peer-reviewed, open access, electronic journal publishing papers on the management of data and databases in Science and Technology. The scope of the Journal includes descriptions of data systems, their publication on the internet, applications and	Wide coverage; Publishes also data compilations, if significant efforts are required in compilation.

[1] This journal is included here as representative for journal in the field of biomedical and health informatics, and selected for presentation here for the current (June 2014) Call for papers for a special issue on Biomedical Data Standards, http://jamia.bmj.com/site/misc/Call%20for%20papers%2004.14.pdf.

Competitor	Brief Description	Relation to OpenScienceLink
	legal issues. All of the Sciences are covered, including the Physical Sciences, Engineering, the Geosciences and the Biosciences, along with Agricultural and the Medical Sciences. The CODATA Data Science Journal is supported by UNESCO.	

Table 1: Pilot 1 competitors

Pilot 2: Assisted Peer-review Process

Competitor	Brief Description	Relation to OpenScienceLink
EasyChair	EasyChair facilitates conference organisers in the refereeing process through: - management and monitoring of the program committee; - management of the access of PC members and referees to papers and conflicts of interests; - automatic paper submission; - paper assignment based on the indicated preferences of PC members; - submission of reviews; - notification of PC members, referees and authors via e-mail; - online discussion of papers; - the author response (aka rebuttal) phase, when the author can respond to the reviews; - automatic preparation of conference proceedings http://www.easychair.org/	EasyChair focuses on the management of the peer review process for conferences, with its main services being the mapping between submitted articles and members of the existent Program Committee of a conference. No intelligent mechanisms are provided, the articles are unlinked from literature and reviewers' selection is only based on their declared interests.
FluidReview	FluidReview is an application management and review system, which allows hosting peer reviews online for scholarships, grants, proposals, fellowships, journal articles, etc. It facilitates the appointment of reviewers for specific submissions or the entire collection and provides customized ranking and evaluation forms & tasks. Reviewers can perform their tasks collaboratively through comments and annotations. http://fluidreview.com	It mainly focuses on application and submission management, with the review process being facilitated mainly through customisable forms, storing of submission material and statistics (such as number of reviews under processing, etc.). No tools for comparing applications and no linking with or search through literature is provided.
Public Knowledge Project - Open Journal Systems	OJS is open source software made freely available to journals worldwide for the purpose of making open access publishing a viable option for more journals. OJS assists with every stage of the refereed publishing process: It follows articles from submission, through peer review, copyediting, layout editing, proofreading, and on to publication.	OJS includes some of the functionality of OSL for the management of the journal publication and review processes. However, it is lacking the focus on reviewing and indexing datasets, and appropriate reviewers are not

Competitor	Brief Description	Relation to OpenScienceLink
		suggested automatically.
ArnetMiner	ArnetMiner recommends reviewers based on title, authors, abstract, and venue (conference/journal). The recommendations are presumably based on the "academic social network" that is the core of ArnetMiner. http://arnetminer.org/reviewer-home	ArnetMiner does not include datasets, and it is unclear what the reviewer suggestions are based on.
OpenConf	OpenConf is a peer-review management system, used by thousands of events in over 100 countries, that facilitates the management of conferences, workshops, and symposia, yet is flexible enough that it also powers journals, grants, books, and competitions. OpenConf is also multilingual, with translations for author and reviewer interfaces included for over a dozen languages. OpenConf is available in multiple editions to meet various needs, and may either be licensed for use on one's own server or from a managed hosting service. http://www.openconf.com/	OpenConf focuses on the management of the peer review process for conferences, workshops, and symposia. Particular focus has been given in the mapping between submitted articles and members of the existent Program Committee of a conference. However, no intelligent mechanisms are provided, the articles are unlinked from literature and reviewers' selection is only based on their declared interests.
Peerage of Science	Peer review in Peerage of Science consists of four stages. Each stage has a deadline, set by the Authors upon sending their manuscript and displayed to Peers deciding whether to engage as a Reviewer. Deadlines are automatically enforced once the process starts, it is not possible for anyone to ask for an extension. For Authors and Reviewers, the submission and peer review process in Peerage of Science is free of any charges. Subscribing journals, however, have different publishing models. Open-access journals usually require fees from authors upon acceptance; these fees must be stated to Authors in the publishing offer sent via Peerage of Science, but Peerage of Science is not collecting any fees itself. https://www.peerageofscience.org	Upon uploading their manuscript to Peerage of Science, authors must define four deadlines, one for each stage of the peer review process. The motivation to participate as a peer reviewer in Peerage of Science stems from a reputation system where the quality of the reviewing work is judged and scored by other users, and contributes to user's profile. The metrics used for reviewers evaluation could be possibly compared with the one used in the OpenScienceLink platform.
Academic Karma	Academic Karma is a web-platform for speeding up and improving academic peer review in any journal by providing reviewers more control and visibility for peer review. Authors access faster, higher quality and more transparent peer review outside the journal system, for free.	Academic Karma is a universal peer review platform. It customises the review form so that it can match the format required by any journal. Also, it enables reviewers to keep a copy

Competitor	Brief Description	Relation to OpenScienceLink
	Editors make access to peer-review freely available to all, bringing down costs of open-access publishing. Reviewers maintain the quality and reproducibility of the open access scientific literature while demonstrating expertise in their field. http://academickarma.org/	of all their peer reviews in a single place.
The Winnower	The Winnower is an open access online scholarly publishing platform that employs open post-publication peer review which is free for all members and works in four basic steps: Submission, Review, Revision and Archival. Submission: Research, class essays, peer reviews, grants, letters, how-to articles, conference summaries, conference talks, blog entries are published in whatever format their author chooses. Review: Researchers and colleagues are invited to review one's work using The Winnower. The review period can be as long or as short as it needs to be. Revision: Based on the reviews received the author can revise his/her work. Archival: Once satisfied with their paper, authors can assign a digital object identifier (DOI) to their manuscript. Metrics including Altmetrics, views, and reviews, will track the impact of work. https://thewinnower.com/	Winnower enables authors to submit their research work, while it also provides the mechanisms required for inviting reviewers as well as services for articles revision and archival purposes. Nevertheless, no intelligent mechanism is being used during the aforementioned process including but not limited to reviewers identification and authors' research work evaluation.

Table 2: Pilot 2 competitors

Pilot 3: Research Trends Detection and Analysis

Competitor	Brief Description	Relation to OpenScienceLink
TechCast	TechCast offers online technology forecasts and technology articles on emerging technologies which are based on scanning of the literature and media, interview authorities, and other sources by their researchers in order to identify trends and background data on roughly 70 emerging technologies. Their website pools background data and the knowledge of 100 experts worldwide to forecast breakthroughs in all fields and to assess their economic and social impact. TechCast researchers and editors scan the literature and media, interview authorities, and draw on various other sources to identify trends and background data on roughly 70 emerging technologies. This data is summarized to guide the estimates of 100 plus technology officers, research scientists and engineers, scholars, and other experts to estimate of the most likely year each breakthrough will occur, the potential economic demand, and experts' confidence. TechCast also offers comprehensive technology consulting services as well as customized technology forecasting and studies. TechCast is an academic research project that depends on membership subscriptions to support its research. It offers professional subscriptions for 1, 2 and 3 years, as	It focuses on the technological world and provides standard lists for trends in specific areas. OpenScienceLink could actually be provided to the TechCast experts for facilitating their work in literature scanning and trend analysis.

Competitor	Brief Description	Relation to OpenScienceLink
	well as student and academic group subscriptions. Trial membership is also available for limited access. http://www.techcast.org/	
The Millennium Project	The Millennium Project is an independent non-profit global participatory futures research think tank of futurists, scholars, business planners, and policy makers who work for international organisations, governments, corporations, NGOs, and universities. The work is distilled in its annual "State of the Future", "Futures Research Methodology" series, special studies, and integrated into this Global Futures Intelligence System. Its primary products include: - On-going assessment of the most significant long-range issues and opportunities, and focused analysis of policies and agencies to address them; - Communications network of futurists and scholars with an international futures research information system with public access; - Advanced training in the methodology and analysis of critical issues, opportunities, and challenges of the future. Moreover, it produces: - The annual State of the Future report which is based on integration of the Project's work as well as others' forecasts, and previous years' reports; - Special studies such as Future Issues of Science and Technology, Futures Research Methodology, Middle-East Peace Scenarios and Future of Africa; It includes discussion rooms and mailing lists and manages a coherent and cumulative process that collects and assesses judgments from over 3,500 people. The Project is sustainable with the important financial support of different kinds of sponsors. http://www.millennium-project.org/index.html	It covers a wide spectrum of domains, from climate change and energy to health and peace, rather than focusing on one domain. It depends on experts input and analysis and provides a rather high-level analysis of trends and opportunities. OpenScienceLink is focused on the biomedical domain and provides flexibility in identifying trends with primary input found in literature and published scientific findings in general. Moreover, it provides great granularity concerning the trends identified, from fields (such as cardiology) to specific topics (such as a gene and its relation to a disorder). The OpenScienceLink platform could be potentially used by the Millennium Project as a toolset for identifying and analysing trends in the biomedical domain.
ArnetMiner	ArnetMiner provides hot topics based on data processed from the Web. Its trend identification is based on their Author-Conference-Topic (ACT) model, through which they automatically discover 200 hot topics from the publications. For each one of these topics, it offers word trends across the past years, popular phrases. It also provides a search for the trend analysis of a specific topic. Moreover, scientists are presented with the identified hot searches, hot topics and scientists for a specific topic. Arnetminer follows the the commercial open source business model. In this model, the product is available for free, potential customers can download, install, and use the product without getting in touch with the commercial firm behind the product. http://arnetminer.org/	It does not allow the researcher to customise their trend analysis but rather provides the same set of results for hot topics to all or presents the trend analysis for a topic that the user introduces to the platform. It focuses on the ICT domain.
TrendMiner Project	The goal of the Trendminer project is to deliver innovative, portable open-source real-time methods for	TrendMiner discovers new trends on the basis

Competitor	Brief Description	Relation to OpenScienceLink
	cross-lingual mining and summarisation of large-scale stream media (e.g. weblogs, Twitter, Facebook). TrendMiner will achieve this through an inter-disciplinary approach, combining deep linguistic methods from text processing, knowledge-based reasoning from web science, machine learning, economics, and political science. Results are validated in high-profile case studies: financial decision support (with analysts, traders, regulators, and economists), political analysis and monitoring (with politicians, economists, and political journalists), detection of psychosocial states and social information, and detection of discussions on medicine and drug effects in social media. http://www.trendminer-project.eu/index.php/obj	of social media. It depends on weakly supervised machine learning algorithms for automatic discovery of new trends and correlations.
Google Trends	Google Trends analyzes a percentage of Google web searches to determine how many searches have been done for the terms you've entered compared to the total number of Google searches done during that time. Google Trends performs a breakout analysis to show "rising searches". Rising searches are searches that have grown significantly in popularity over a given time period when compared to a preceding time period. http://www.google.com/trends/	Google Trends does not provide automatic trend detection, it is more a trend visualization tool for a (small) set of keywords. It covers scientific and life science terms. It limits the user to a maximum of 5 compared terms in one graph. It provides the user only with relative values, no absolute volumes are depicted.
Institute For The Future	IFTF is an independent, non-profit research institute that maintains research programs on the futures of technology, health, and organizations. It publishes a variety of reports and maps, as well as a blog on emerging technologies. The research staff of IFTF includes experienced forecasters representing a range of disciplines from the social sciences, public policy, and technical domains. IFTF also works through a network of affiliates who bring a diversity of perspectives and experiences from university professors to independent thought leaders and hands-on innovators. http://www.iftf.org/	IFTF depends on experts input and analysis and provides a rather high-level analysis of trends and opportunities. OpenScienceLink is focused on the biomedical domain and provides and provides an automated trends detection. Thus, OpenScienceLink platform could be potentially offered as an important assistant toolset to the experienced forecasters and network of affiliates of IFTF for identifying and analysing trends in the biomedical domain.
Essential Science Indicators	ESI is a research-analytics platform within the Web of Science that provides a comprehensive compilation of science performance statistics and science trends data based on journal article publication counts and citation	ESI is based on journal article publication counts and citation data from Thomson Reuters databases. Thus, its use

Competitor	Brief Description	Relation to OpenScienceLink
	data from Thomson Reuters databases. It is an analytical resource for policymakers, administrators, analysts and information specialists in government agencies, universities, corporations, private laboratories, publishing companies, and foundations, as well as members of the scientific press and recruiters. ESI can identify significant trends in the sciences and social sciences. http://wokinfo.com/products_tools/analytical/essentialscienceindicators/	is restricted only to those who have access to these databases. OpenscienceLink is based on publicly availiable open-access data and has considerable advantage over ESI.
HCPP Forecasting: Trend Analysis and Pattern Detection	HCPP (Hobby Center for Public Policy) data visualization tools make use of a variety of methods to perform trend analysis and pattern detection. These methods give users the ability to perform data analysis beyond that of simple visualization. In many cases, the future behaviour of a system or sample group may be more important than its current behaviour, which also includes detecting when a specific behaviour may have periodically occurred in the past. http://www.uh.edu/class/hcpp/research/forecasting/	These tools and techniques enable users to further analyse a large amount of data. The approach followed could be compared with the one being used in the OpenScienceLink platform and potentially combined with the outcome of existing algorithms used in OpenScienceLink for the visualization of data resulting from the trend analysis.

Table 3: Pilot 3 competitors

Pilot 4: Suggestion of Researchers' Collaboration

Competitor	Brief Description	Relation to OpenScienceLink
Research Gate	ResearchGate comprises a social networking site for scientists to share papers, ask and answer questions, and find collaborators. It has been described as a mash-up of "Facebook, Twitter and LinkedIn" that includes "profile pages, comments, groups, job listings, and 'like' and 'follow' buttons". Members are encouraged to share raw data and results from both failed and successful experiments. Based on the scientist's profile, it regularly suggests papers of their interest for reading, which then the person may request from the author through the platform. Job announcements are also provided. It offers a series of statistics which can be shared in Facebook, LinkedIn, Twitter and g+. https://www.researchgate.net	Each scientist joining the portal is encouraged to enter information about their papers, including the document itself. Annotation of the papers is requested by their authors. Hence, it includes manual processes for its services provision. Linking among its members is based on declared relationships, based on their institutions, submitted paper keywords and manually entered research interests.

Competitor	Brief Description	Relation to OpenScienceLink
ArnetMiner	ArnetMiner provides search and mining services for researcher social networks. In particular, it creates a semantic-based profile for each researcher by extracting information from the Web and integrates academic data (e.g., the bibliographic data and the researcher profiles) from multiple sources. Moreover, it analyzes and discovers patterns from the built researcher social network. The main search and analysis functions in ArnetMiner include: Profile search, Expert finding, Course search, Sub-graph search. http://arnetminer.org/	It is an interesting platform which allows for finding experts as well as comparing them based on a series of factors. Based on the person's profile it offers recommendation of collaborators. Although not a domain-focused platform, it mainly focuses on ICT.
MyScience Work	MyScienceWork is a communication platform including more than 31 million open access publications from over 30 disciplines. It includes an international community of researchers, engineers, students and science communicators. Users are allowed to comment upon and annotate publications. Moreover, job announcements are available. http://www.mysciencework.com/#the-research-network	Contacts are suggested based on the profile that the researcher creates manually in the system. It does not focus on a particular domain. It processes data only from open access journals.
Academia.edu	Academia.edu is a platform for academics to share research papers and view analytics on their profiles, which include number of profile views, number of document views and followers. https://www.academia.edu	It is greatly based on manual data entrance on behalf of the researchers. It mainly focuses on publication sharing. It does not focus on a particular domain.
Methodspace	Methodspace is an online network of researchers for sharing research, resources and debates. Methodspace users have free access to selected journal articles, book chapters, etc. which highlight emerging topics in the field. http://www.methodspace.com/	Connection with other researchers is mainly done through discussions about topics and participation in fora. It does not focus on a particular domain.
BiomedExperts	Scientific professional network that "connects biomedical researchers through the display and analysis of the networks of co-authors with whom each investigator works to publish scientific papers. The comprehensive system of pre-populated expert profiles, coupled with the ability to analyze all associated professional connections within the co-author network, allows scientists and researchers across organizations the ability to share data and collaborate in ways never before considered" (biomedexperts.com). http://biomedexperts.com	It is designed to a niche audience – biomedical researchers, who can (1) connect to each other through their virtual profiles, (2) explore their personal network based on co-authorship, (3) expand scientific collaboration, (4) connect to other scholars via the platform, (5) cultivate and grow their professional network.

Competitor	Brief Description	Relation to OpenScienceLink
Microsoft Academic Search	It is an experimental research service designed to explore how scholars, scientists, students, and practitioners find academic content, researchers, institutions, and activities. As is true of many research projects at Microsoft, this service is not intended to be a production Web site, and it will likely be taken offline when appropriate given the research goals of the project. http://academic.research.microsoft.com	It anyone (no registration required) to search for authors and organisations in by providing their terms of interest. This way, a researcher can find other entities interested in /working on relevant topics to cooperate with. The offered functionality is very basic in comparison to that of the OpenScienceLink platform.
MyNetResearch Empowering Collaboration	MyNetResearch is an online personal repository which contains features and functionality designed to support the entire research enterprise for academic and corporate members. These features include: projects, Find Researcher, Email/Chat, News, Blogs and Articles, Forums, Toolbox (Literature Search and Citation Analyzer, Journal Selection Guide, Research Methods Adviser, Conference Selection Guide, Grants Program Locator, Online Survey Creator, Bibliography Creator), Jobs. http://www.mynetresearch.com	It enables members to search for other researchers based on a list of desired attributes, Connection with other researchers is done through discussions about topics and participation in fora and by writing together projects. It is not focused on particular domain.
Biowebspin	Biowebspin identifies itself as a leading professional network in Life Sciences, connecting academia and industry. Biowebspin is the platform to find and connect with the right partners, and the place to network, work, and look up information thanks to smart tools and boards. In beta test from late 2012 to early 2013, Biowebspin is now in the top 3 of the most visited websites worldwide in Life Sciences. Biowebspin SA was created in 2013 in Switzerland (capital: CHF 550,000). http://www.biowebspin.com	Biowebspin uses such smart tools as: Dashboard, Biomatching, PubAdvanced, KOL Identification, Job & Event Boards to find relevant partners, instutions or private organizations for the user.
LinkedIn	The world's largest professional network with 300 million members in over 200 countries and territories around the globe. https://www.linkedin.com/about-us?trk=hb_ft_about	LinkedIn aims to connect the world's professionals to make them more productive and successful by getting access to people, jobs, news, updates, and insights that help you be great at what you do.

Competitor	Brief Description	Relation to OpenScienceLink
DIRECT2 Experts	The DIRECT2Experts network is open to all biomedical institutions, is a pilot project facilitated by the Research Networking Working Group of the NIH-supported Clinical & Translational Science Award (CTSA) Consortium. http://direct2experts.org	Network aims to improve biomedical research and leverage our strengths as a community by creating a network that enables easy access to expertise and related resources across institutions regardless of local platforms and tools, and in collaboration with participating institutions to ensure access to approved and verified data.
BioMedUSA	BioMedUSA network aims to connect individual biomedical researchers and institutional Technology Transfer Offices owning proprietary Biological Research Materials or rights to relevant technologies with scientists and institutions searching for the available to share or license biological materials and technologies. http://biomedusa.org	The OpenScienceLink automatic Collaboration services could be of value.

Table 4: Pilot 4 competitors

Pilot 5: Evaluation of Research

Competitor	Brief Description	Relation to OpenScienceLink
Thomson Reuters Web of Science	Web of Science® provides researchers, administrators, faculty, and students with access to citation databases. Its content come from over 12,000 of journals worldwide, including Open Access journals and over 150,000 conference proceedings across more than 250 disciplines. http://thomsonreuters.com/web-of-science/	It presents evaluations based on citation metrics. The analysis provided is mainly on a journal basis. The OpenScienceLink models and evaluation services could be feeding the platform enriching the provided evaluation.
Thomson Reuters InCites	*InCites*™ is a customized, web-based research evaluation tool that allows researchers to analyze institutional productivity and benchmark their output against peers worldwide. With customized citation data, global metrics, and multidimensional profiles on the leading research institutions as well as with robust visualization and reporting tools, it allows for the creating and sharing of reports. Its main features include: • Comparison of quantitative and qualitative aspects of performance against other institutions and world and field benchmarks • Presentation of influential and emerging researchers and research trends • Identification of potential areas for growth • Monitoring of collaboration activity and tracking of	It presents evaluations based on popular evaluation metrics. The OpenScienceLink models and evaluation services could be feeding the platform enriching the provided evaluation.

Competitor	Brief Description	Relation to OpenScienceLink
	new collaboration opportunities http://researchanalytics.thomsonreuters.com/incites/	
ResearchGate	It calculates a ResearchGate (RG) score based on the publications' views and downloads, who interacts with them and how often, the number of questions posed and answered and the number of followers. It also provides the scientist's positioning among its members in terms of the score in the form of a percentage.	The RG score includes a subset of the parameters that the OpenScienceLink will use for evaluating scientists. Moreover, it is rather rigid and does not allow for scientists to exclude a parameter that they do not consider important.
ArnetMiner	ArnetMiner presents researchers with evaluation for academics based on 8 measures; "H-index", "Citation", "Uptrend, "Activity", "Longevity", "Diversity, "Sociability", "New Star". Scientists in a field are ranked based on them. http://arnetminer.org/	It only provides scientists' evaluation. Although not a domain-focused platform, it mainly focuses on ICT.
GoogleScholar Metrics	Google Scholar Metrics is a tool for authors to evaluate the visibility and influence of recent articles in scholarly journals; it also helps authors as they consider where to publish their new research. Google Scholar Metrics provide with possibilities to (a) browse the top 100 publications in several languages ordered by their five-year h-index and h-median metrics; (b) explore publications in research areas of your interest; (c) Scholar Metrics currently cover articles published between 2008 and 2012, both inclusive. http://scholar.google.lt	It presents evaluations of journals based on popular evaluation metrics. The OpenScienceLink models and evaluation services could be feeding the platform enriching the provided evaluation.
Harzing's Publish or Perish	Harzing's Publish or Perish is a freely available software program that presents with evaluation of author's impact and journal's impact based on a number of citation indexes (e.g., number of papers and citations, cites/year, h-index, g-index) according to Google Scholar and Microsoft Academic Search. http://www.harzing.com/pop.htm	It presents evaluations based on popular evaluation metrics. The OpenScienceLink models and evaluation services could be feeding the platform enriching the provided evaluation.
Microsoft Academic Search	Microsoft Academic Search indexes millions of academic publications. As is true of many research projects at Microsoft, this service is not intended to be a production Web site, and it will likely be taken offline when appropriate given the research goals of the project. In Microsoft Academic Search, objects in the search results are sorted based on two factors: (a) their relevance to the query; (b) a static rank value that is calculated for each item in the Microsoft Academic Search index. The static rank encompasses the authority of the result, which is determined by several details, such as how often and where a publication is cited.	It presents evaluations based on popular evaluation metrics. The OpenScienceLink models and evaluation services could be feeding the platform enriching the provided evaluation.
Scopus	Scopus features smart tools to track, analyze and visualize research. Scopus delivers an overview of the world's research output in the fields of science, technology,	It presents evaluations based on popular evaluation metrics. The

Competitor	Brief Description	Relation to OpenScienceLink
	medicine, social sciences and arts and humanities. Scopus provide users with possibilities to: (a) Track citations over time for a set of authors or documents, with Citation Overview/Tracker; (b) View h-index for specific authors; (c) Assess trends in search results with Analyze Results; (d) Analyze an author's publishing output with Author Evaluator; (e) Gain insight into journal performance with Journal Analyzer and alternative journal impact metrics SNIP and SJR. http://www.elsevier.com/online-tools/scopus	OpenScienceLink models and evaluation services could be feeding the platform enriching the provided evaluation.
Altmetric	The program is designed to track what people are saying about papers online on behalf of publishers, authors, libraries and institutions. http://www.altmetric.com	Altmetric collects mentions of scholarly articles from all across the Web by gathering attention from newspapers, blogs, social media, and more.
PLOS Article-Level Metrics	A suite of established metrics that measure the overall performance and reach of research articles.	Article-Level Metrics are a comprehensive set of impact indicators that enable numerous ways to assess and navigate research most relevant to the field itself, including: (1) usage, (2) citations, (3) social bookmarking and dissemination activity, (4) media and blog coverage, (5) discussion activity and ratings
Journal Review	JournalReview is an international interdisciplinary Internet based unbiased forum for review of medical literature. https://www.journalreview.org/about	It provides a venue to improve communication amongst physicians and lead to better understanding and interpretation of medical literature. Users can rate the literature.

Table 5: Pilot 5 competitors

1.3 Positioning to the Competitive products

Pilot 1: Research Dynamics-aware OA Data Journals Development (New Journal issue suggestion, Dataset submission, Dataset peer review, publishing, assessment and evaluation)

Service / Service Provider	OpenScience Link	Scientific Data	LODUM	OpenAire EU	re3data
OpenScienceLink Pilot 1 functionalities					
New journal issue suggestion	+	-	-	-	-
Dataset submission	+	+	+	.	-
Dataset peer review	+	+	-	-	-
Finalisation and Publishing	+	+	+	+	+
Assessment and evaluation	+	+	-	-	+
Focusing on the life sciences	+	+	-	-	-
Costs	-	+	-	-	-
Help/tutorials/documentation					
Online help	-	http://www.nature.com/scientificdata/about/	http://lodum.de/about/	http://www.openaire.eu/	http://www.re3data.org/faq/
Video tutorials	-	-	-	http://www.openaire.eu/en/support/video-tutorials	-
Contextual help	-	-	-	-	-

Table 6: Pilot 1 positioning of competitive products (a)

Service / Service Provider	OpenScience Link	myExperiment	Open PHACTS	Biodiversity Data Journal	Geoscience Data Journal
OpenScienceLink pilot 1 functionalities					
New journal issue suggestion	+	-	-	-	-
Dataset submission	+	+	+	link to the external repo is required upon submission	+
Dataset peer review	+	+	-	+	+
Finalisation and Publishing	+	+	+	+	+
Assessment and evaluation	+	+	-	-	-
Focusing on the life sciences	+	+	+	+	-
Costs	-	-	-	-	+
Help/tutorials/documentation					
Online help	+	http://www.youtube.com/watch?v=Y6_Kz5L010g	http://www.openphacts.org/documents/Presentations/What_Is_OPS_v1.1.pdf	http://biodiversitydatajournal.com/about#Forauthors	http://onlinelibrary.wiley.com/journal/10.1002/%28ISSN%292049-6060/homepage/author_faqs.htm
Video tutorials	-	http://www.youtube.com/watch?v=x83pzMMw7lk	-	-	-
Contextual help	+	-	-	-	-

Table 7: Pilot 1 positioning of competitive products (b)

Service / Service Provider	OpenScience Link	Journal of Open Archaeology Data	Journal of Open Psychology Data	GigaScience	Genomics Data
OpenScienceLink Pilot 1 functionalities					
New journal issue suggestion	+	-	-	-	-
Dataset submission	+	+	+	-	-
Dataset peer review	+	+	+	+	+
Finalisation and Publishing	+	+	+	+	+
Assessment and evaluation	+	-	-	-	-
Focusing on the life sciences	+	_	+	+	+
Costs	-	Article Publication Charge of €30 per publication	Article Publication Charge of €30 per publication	-	-
Online help	-	http://openarchaeologydata.metajnl.com/about/submissions	http://openpsychologydata.metajnl.com/about/submissions	http://www.gigasciencejournal.com/authors/instructions	http://www.elsevier.com/journals/genomics-data/2213-5960/guide-for-authors
Video tutorials	-	-	-	-	-
Contextual help	-	-	-	-	-

Table 8: Pilot 1 positioning of competitive products (c)

Service / Service Provider	OpenScience Link	Journal of Open Public Health Data	EPJ Data Science	Dataset Papers in Science	CODATA Data Science Journal
OpenScienceLink Pilot 1 functionalities					
New journal issue suggestion	+	-	-	-	-
Dataset submission	+	+	-	+[2]	+
Dataset peer review	+	+	-	+	+
Finalisation and Publishing	+	+	+	+	+
Assessment and evaluation	+	-	+	+ (peer reviewed)	-
Focusing on the life sciences	+	+	-	partial[3]	+-
Costs	-	+	+	-	+-
Online help	-	http://openhealthdata.metajnl.com/about/editorialPolicies#custom-1	http://www.epjdatascience.com/about/faq	-	http://www.codata.org/dsj/submissions.html
Video tutorials	-	-	-	-	-
Contextual help	-	-	-	-	-

Table 9: Pilot 1 positioning of competitive products (d)

[2] http://www.hindawi.com/journals/dpis/guidelines/

[3] partial; it covers biology, medicine, neuroscience and pharmacology, among many others

Service / Service Provider	OpenScience Link	Earth System Science Data	Journal of Open Archaeology Data	Journal of Chemical and Engineering Data	Journal of Physical and Chemical Research Data
OpenScienceLink pilot 1 functionalities					
New journal issue suggestion	+	-	-	-	-
Dataset submission	+	+	+	+	+
Dataset peer review	+	+	-	+	+
Finalisation and Publishing	+	+	+	+	+
Assessment and evaluation	+	+	-	-	+
Focusing on the life sciences	+	-	-	+	+
Costs	-	+	+ (max £100.00)	+	-
Help/tutorials/documentation					
Online help	+	+	+	+	+
Video tutorials	-	-	-	+	-
Contextual help	+	-	-	-	-

Table 10: Pilot 1 positioning of competitive products (e)

Service / Service Provider	OpenScience Link	International Journal of Robotics Research	F1000 Research	Ecological Archives - Data Papers	Data in Brief
OpenScienceLink pilot 1 functionalities					
New journal issue suggestion	+	-	-	-	-
Dataset submission	+	+	+	+	+
Dataset peer review	+	+	+	+	+
Finalisation and Publishing	+	+	+	+	+
Assessment and evaluation	+	-	-	-	-
Focusing on the life sciences	+	-	+	-	-
Costs	-	-	-	+ ($250)	+
Help/tutorials/documentation					
Online help	+	+	+	+	+
Video tutorials	-	-	-	-	-
Contextual help	+	-	-	-	-

Table 11: Pilot 1 positioning of competitive products (f)

Pilot 2: Novel open, semantically-assisted peer review process (paper-based reviewers suggestion and selection, review support, review for submission, open-identity post review discussion)

Service / Service Provider	OpenScience Link	EasyChair	FluidReview	ArnetMiner	Knowledge Project - Open Journal Systems
OpenScienceLink Pilot 2 functionalities					
Paper-based reviewers suggestion	+	-	-	+	-
Review support	+	-	-	+	-
Review form submission	+	+	+	+	+
Open-identity post-review discussion	+	-	+	-	-
Focusing on the life sciences	+	-	-	-	-
Costs	-	-	+	-	-
Help/tutorials/documentation					
Online help	+	http://www.easychair.org/faq.cgi	-	http://arnetminer.org/reviewer-home	http://pkp.sfu.ca/wiki/index.php?title=OJS_Documentation
Video tutorials	+	+	http://fluidreview.com/videos	-	-
Contextual help	+	-	-	-	-

Table 12: Pilot 2 positioning of competitive products (a)

Service / Service Provider	OpenScience Link	OpenConf	Peerage of Science	Academic Karma	Winnower
OpenScienceLink Pilot 2 functionalities					
Paper-based reviewers suggestion	+	-	-	-	-
Review support	+	+	+	+	+
Review form submission	+	+	+	+	+
Open-identity post-review discussion	+	+	-	Open, signed reviews	+
Focusing on the life sciences	+	-	-	-	-
Costs	-	+	-	-	-
Help/tutorials/documentation					
Online help	+	+	+	+	+
Video tutorials	+	-	-	-	-
Contextual help	+	-	-	-	-

Table 13: Pilot 2 positioning of competitive products (b)

Pilot 3: Data Mining for Biomedical and Clinical Research Trends detection and analysis (trend mining)

Service / Service Provider	OpenScience Link	ArnetMiner	TechCast	Millennium Project
OpenScienceLink Pilot 3 functionalities				
Trend Mining	+	+	+	+
Focusing on the life sciences	+	-	-	-
Includes life science data	+	+	+	+
Publicly Available	+	+	-	+
Costs	-	-	+	-
Help/tutorials/documentation				
Online help	+	http://arnetminer.org/ranks/author	http://www.techcast.org/methodology.aspx	+
Video tutorials	+	+	-	+
Contextual help	+	-	-	+
Data Sources used to extract the trend information				
Peer-Reviewed Research Literature	+	+	-	-
Patents	-	-	-	-
Clinical Trials	-	-	-	-
Datasets	+	-	-	-
Social Media	+	-	-	-
User Queries	-	-	-	-
Web	-	-	-	-
Human Experts	-	-	+	+

Table 14: Pilot 3 positioning of competitive products (a)

Service / Service Provider	Google Trends	TrendMiner	Institute For The Future	ESI
OpenScienceLink Pilot 3 functionalities				
Trend Mining	+	+	+	+
Focusing on the life sciences	-	-	-	+
Includes life science data	+	+	+	+
Publicly Available	+	-	+	-
Costs	-	+-	-	+
Help/tutorials/documentation				
Online help	https://support.google.com/trends/	http://www.trendminer-project.eu	-	-
Video tutorials	+	+	+	+
Contextual help	+	-	+	+
Data Sources used to extract the trend information				
Peer-Reviewed Research Literature	-	-	-	+
Patents	-	-	-	-
Clinical Trials	-	-	-	-
Datasets	-	-	-	-
Social Media	-	+	-	-
User Queries	+	-	-	+
Web	-	-	-	-
Human Experts	-	-	+	+

Table 15: Pilot 3 positioning of competitive products (b)

Service / Service Provider	OpenScienceLink	HCPP Forecasting: Trend Analysis and Pattern Detection	Bandolier Cumulative meta-analysis
OpenScienceLink Pilot 3 functionalities			
Trend Mining	+	+	+
Focusing on the life sciences	+	-	-
Includes life science data	+	-	+
Publicly Available	+	+	+
Costs	-	-	-
Help/tutorials/documentation			
Online help	+	+	+
Video tutorials	+	-	-
Contextual help	+	-	-
Data Sources used to extract the trend information			
Peer-Reviewed Research Literature	+	-	-
Patents	-	-	-
Clinical Trials	-	-	-
Datasets	+	+	-
Social Media	+	-	-
User Queries	-	-	-
Web	-	-	+
Human Experts	-	-	-

Table 16: Pilot 3 positioning of competitive products (c)

Pilot 4: Data Mining for proactive formulation of scientific collaborations (Dynamic and automated identification of researcher's relationships, Dynamic and automated identification of groups of relevant researchers)

Service / Service Provider	OpenScience Link	Research Gate	ArnetMiner	Method space	MyScience Work	Biomed Experts
OpenScienceLink Pilot 4 functionalities						
Dynamic and automated identification of researcher's relationships	+	+	+	-	-	+
Dynamic and automated identification of groups of relevant researchers (around specific areas or interests)	+	-	-	-	-	-
focusing on the life sciences	+	-	-	-	-	+
Costs	-	-	-	-	-	+
Help/tutorials/documentation						
Online help	+	+	http://arnetminer.org/ranks/author	+	+	+
Video tutorials	+	+	+	-	-	-
Contextual help	+	-	-	-	-	-

Table 17: Pilot 4 positioning of competitive products (a)

Service / Service Provider	Microsoft Academic Search	MyNet Research Empowering Collaboration	Biowebspin	LinkedIn	DIRECT2 Experts	BioMedUSA	Academia.edu
OpenScienceLink Pilot 4 functionalities							
Dynamic and automated identification of researcher's relationships	-	-	-	-	+	-	+
Dynamic and automated identification of groups of relevant researchers (around specific areas or interests)	-	+	-	-	+	-	+
focusing on the life sciences	-	-	+	-	+	+	-
Costs	-	+	-	-	-	-	-
Help/tutorials/documentation							
Online help	+	+	+	+	+	+	+
Video tutorials	-	-	-	-	-	-	-
Contextual help	-	-	-	-	-	-	-

Table 18: Pilot 4 positioning of competitive products (b)

Pilot 5: Scientific field-aware, Productivity- and Impact-oriented Enhanced Research Evaluation Services (Research work evaluation, Researcher evaluation, Research group or community evaluation, Journal evaluation, Institution evaluation, Country evaluation)

Service / Service Provider	OpenScience Link	Thomson Reuters Web of Science	Thomson Reuters InCites	Research Gate	ArnetMiner	Google Scholar Metrics
OpenScienceLink Pilot 5 functionalities						
Research work evaluation	+	+	+	-	-	+
Researcher evaluation	+	+	+	+	+	-
Research group or community evaluation	+	+	+	-	-	-
Journal evaluation	+	+	-	-	-	+
Country evaluation	+	+	+	-	-	-
focusing on the life science	+	-	-	-	-	-
Costs	-	+	+	-	-	-
Help/tutorials/documentation						
Online help	+	http://thomsonreuters.com/scholarly-scientific-research/	+	+	+	+
Video tutorials	+	+	http://researchanalytics.thomsonreuters.com/incitesd	-	+	-

Service / Service Provider	OpenScience Link	Thomson Reuters Web of Science	Thomson Reuters InCites	Research Gate	ArnetMiner	Google Scholar Metrics
			emo/			
Contextual help	+	-	-	-	+	-

Table 19: Pilot 5 positioning of competitive products (a)

Service / Service Provider	Harzing's Publish or Perish	Microsoft Academic Search	Scopus	Altmetrics	PLOS Article-Level Metrics	Journal Review
OpenScienceLink Pilot 5 functionalities						
Research work evaluation	+	+	+	+	+	-
Researcher evaluation	+	+	+	-	-	-
Research group or community evaluation	+	+	+	-	-	-
Journal evaluation	+	+	+	-	-	+
Country evaluation	-	-	-	-	-	-
focusing on the life science	-	-	-	-	-	-
Costs	-	-	+	+	-	-
Help/tutorials/documentation						
Online help	+	+	+	+	+	+
Video tutorials	-	-	-	+	-	-
Contextual help	-	-	-	-	-	-

Table 20: Pilot 5 positioning of competitive products (b)

1.4 Targeted Customers and Stakeholders

Pilot 1: Research Dynamics-aware OA Data Journals Development (New Journal issue suggestion, Dataset submission, Dataset peer review, publishing, assessment and evaluation)

Customer/Stakeholder	Why to use the Platform
Researchers	To publish scientific datasets, experience a fast review process to ensure fast publication.
Evaluators	Find evidence on research quality in peer-reviewed publication of datasets.
Publisher	To take advantage of the offered services with regard to submission, management and search for biomedical data papers.
Editor	Assess opportunities for special issues or even launching a new journal based on identified trends.
Research Sponsors and Funding Authorities	Find evidence on research quality in peer-reviewed publication of datasets and indication of interest to a particular research field (via article-level metrics).

Table 21: Pilot 1 targeted customers and stakeholders

Customer/Stakeholder	Brief Description	Why to use the Platform
SpringerOpen	Publisher	In the initial discussion with SpringerOpen, they expressed interest in data journals, especially for the biomedical field.
Elsevier	Publisher	Electronic Manuscript Submission System (EMSS) currently doesn't include data journal functionality.
Nature Group	Publisher	Launched data journal "Scientific Data" in May 2014.

Table 22: Examples of Pilot 1 targeted customers and stakeholders

Pilot 2: Novel open, semantically-assisted peer review process (paper-based reviewers suggestion and selection, review support, review for submission, open-identity post review discussion)

Customer/Stakeholder	Why to use the Platform
Researchers	Assure relevant classification of own datasets and papers and thus facilitate the identification of most suitable reviewers; Gain experience as reviewers.
Evaluators	Evaluate papers of high relevance to their research interests. Equipped with tools reducing their effort in the evaluation process and increasing the reliability of their review outcome.
Publisher	Speed up and ensure high quality of the review process. Improve their own submission platforms by using the offered services that support a semi-automated review process.
Editor	To find more reliably competent candidate reviewers for their journals and to get an indication of the reviewer's track record.
Research Sponsors and Funding Authorities	Seek guarantees that published results (e.g. datasets) of sponsored research have been subject of rigorous review of high quality.

Table 23: Pilot 2 targeted customers and stakeholders

Customer/Stakeholder	Brief Description	Why to use the Platform
SpringerOpen	Publisher	Expressed interest in reviewer suggestion and suggested including "reviewer score".
Elsevier	Publisher	Electronic Manuscript Submission System (EMSS) currently doesn't offer automatic assistance for carrying out the review process or automatic selection of qualified reviewers.
Nature Group	Publisher	Reviewer suggestion functionality potentially relevant for "Scientific Data" data journal.

Table 24: Examples of Pilot 2 targeted customers and stakeholders

Pilot 3: Data Mining for Biomedical and Clinical Research Trends detection and analysis (trend mining)

Customer/Stakeholder	Why to use the Platform
Researcher	Avoid starting or reconsider continuing working on research topics which are in decline. Diverse their research area to new subfields with increased interest.
Universities/Academic Institutes/Scientific Societies	Improved organisation of and more effective distribution of resources to the research efforts of their members and internal entities. Improved organization of scientific congresses and meetings to include "hot" topics and invite top researchers as speakers.
Editor	Facilitate the assessment of proposals about the organisation of special issues Support the decision process concerning the organization of special issues in fields with rapidly rising interest. Detect top authors in a field that could be invited to contribute to a special issue or a new journal.
Publishers	Use as a tool for re-evaluating the topics that their journals focus on as well as for deciding upon the issuing of a new journal (aiming at a rising and promising topic). Detect top researchers in a topic or field and invite them to become editors or members of the editorial board.
Enterprises with R&D departments (e.g., pharma)	Access to a series of tools and services which can significantly assist building their research strategy and allow for more effective positioning of their resources in research efforts.
Research Sponsors and Funding Authorities	Use of the platform for consultation when preparing research agendas and calls for research proposals. Assist in decision about proposals for research grants.
Media	Improvement of the media coverage of scientific areas, fields and topics which are considered as uprising or reviving and their progress could potentially be of interest to the public. Fast and effortless identification of top or rising scientists in specific topics, fields or areas for whom documentaries could be prepared or interviews be taken.

Table 25: Pilot 3 targeted customers and stakeholders

Pilot 4: Data Mining for proactive formulation of scientific collaborations (Dynamic and automated identification of researcher's relationships, Dynamic and automated identification of groups of relevant researchers)

Customer/Stakeholder	Why to use the Platform
Researcher	Broaden up collaborations with other researchers and/or research groups and communities. Increase potential for research synergies and visibility for job positions. Find collaborators, who are highly relevant to the topic of their interest, fast and effortlessly. Be presented with the opportunity to join dynamically formed research communities and, thus, remain involved in activities within their field of interest. Be easily pulled out from the research "crowd".
Publisher	Fast and effortless discovery of potential editors for their journals whose research activity fits well the journals' topics.
Editor	Increased and/or more targeted invitations to researchers for submission of articles journals and/or journal issues.
Research Sponsors and Funding Authorities	Efficient and effective discovery of potential evaluators for research work which has been applied for funding.

Table 26: Pilot 4 targeted customers and stakeholders

Pilot 5: Scientific field-aware, Productivity- and Impact-oriented Enhanced Research Evaluation Services (Research work evaluation, Researcher evaluation, Research group or community evaluation, Journal evaluation, Institution evaluation, Country evaluation)

Customer/Stakeholder	Why to use the Platform
Researcher	Access to research evaluation of high customisability and granularity; from researcher and research group to institutions and countries and from papers and data sets to journals and publishers for : - efficient management of their own scientific curriculum vitae - having an instant view of the evaluation of: - researchers within their field in order to direct their collaboration interest or follow their work - scientific works in their field so that they remain always updated with important research results and efforts - available publishing means in their field and/or specific topic so that they make informed decisions about the journals and conferences through which they will publish their work - available entities (both academic and business ones) in their field – or related ones – so that they can investigate their job-related options with as much information available as possible.
Publisher	Are given the possibility to have access at any time to the evaluation of their publishing means (including journals, journal issues, special issues, etc) from a variety of angles and be able to detect and highlight the one(s) in which they are best at (e.g., academic impact, business penetration, etc) for their dissemination and communication purposes. Instant access to the evaluation of researchers for making informed decisions when choosing editors and building the editorial board or when planning to invite researchers to submit papers to their journals.
Research Sponsor and/or Funding Authority	Access to the evaluation of researchers who apply for funding allowing for a more informed and less time-consuming decision

	process.
Academic and/or Research Institution	Continuous monitoring of the evaluation of their institution, schools, departments, groups, researchers from various aspects rather than relying on yearly analysis of their positioning among other institutions which is quite often based on partial data and very specific evaluation metrics.
Media	Improvement of the media coverage of biomedical articles which publish high quality research and of scientists whose research is of great value to their field rather than relying on the media's assessment of the scientific research value (with its main driver quite often being potential appeal to readers). Increased credibility and improved reputation of the media means (newspaper, magazine, electronic news portal, etc) by avoiding publishing of scientific articles which are of low scientific validity and may lead to confusion, cause false hope or unsubstantiated worries to the public.

Table 27: Pilot 5 targeted customers and stakeholders

2 The OpenScienceLink Sustainability Strategy

2.1 The sustainability approach

Overall, the OpenScienceLink sustainability activities will ensure the sustainability of the project services and the rapid and wide adoption of the latter beyond the project's lifetime and the EC funding. The specification and, even more, the execution of the strategy is expected to be further boosted by the overall landscape in research and publications as well as the exploitation and dissemination activities and the roadmap to be built within the project. In fact, the latter activities need to be taken into serious consideration when developing the sustainability plans as several of their key aspects, such as the definition of the business targets, the market, the pricing scheme and, in general, the business plan and the market analysis, are quite relevant and affect, up to a certain extent, the customer base, the replicability perspectives and the overall sustainability potential. Hence, the plans are strongly connected with all the other WP9 tasks (namely, T9.1 Dissemination, Communication and Premarketing, T9.2 Establishment and Building Up of an External Users Groups and T9.3 Business and Marketing Plans) as well as WP8 with T8.5 Best Practices, Blueprints and Lessons Learnt and WP2 with T2.4 Specification of Key Performance Indicators (KPIs). Therefore, the progress within each of these tasks is expected to further trigger updates for the sustainability plans.

Based on their temporal projection, two approaches are considered for the OpenScienceLink sustainability strategy: (a) viability at a mid-term level and (b) sustainability at a long-term level. Furthermore, an interesting aspect to be investigated is the replicability of services in other scientific domains, such as computer science or psychology, which will enable the implementation and application of the services in a greater variety of domains and will in turn ensure a greater customer and user base.

The evaluation of the viability aspect of the OpenScienceLink results will be based on the TELOS [21] methodology. The latter specifies five key areas which constitute the acronym of the methodology and determine whether the project should continue its works or not. More specifically, these areas are presented in the following table:

Aspect	Question it aims at answering	Description
Technical	"Is the project technically feasible?"	In order to address this aspect, it is needed to show that the key technical aspects of the system, i.e., architecture, user interface, underlying mechanisms, technologies used and so on, allow for the provision of the targeted functionalities. The implementation of the latter can be made based on existing or soon to be available components. Hence, it aims at ensuring the realistic design and implementation of the platform.
Economic	"Can the project be afforded?" "Will it increase cost/benefit?"	This aspect focuses on the cost and the estimated value of the platform and the provided services. It aims at evaluating whether the platform is worth being developed. The assessment of this aspect allows for the determination of the economic benefits, through a cost/benefits analysis, to the entities that will develop and/or use the OpenScienceLink platform.

Aspect	Question it aims at answering	Description
Legal	"Is the project legally viable?"	This aspect focuses on investigating how and the level at which current legislation as well as internal policies of the companies and organisations involved will affect the project and the platform.
Organisational / **O**perational	"Will the users accept the change?" "How effective the project will be in solving the problem at hand?	This aspect focuses on assessing the effectiveness that the platform will offer to the organisations in addressing the issues that the project aims at, and in achieving the targeted benefits.
Scheduling	"Can the project be done in time?"	This aspect focuses on the temporal perspective of the project. More specifically, it analyses the schedule of the project delivery in terms of its viability. If it is evaluated as unrealistic, then it is updated with a more realistic time frame and required resources.

Table 28: The five key areas of the TELOS methodology

It should be noted that the KPIs (Key Performance Indicators) which are developed in WP2 and presented in the report D2.1 (Report on Stakeholders, Main Use Cases, KPIs and Data Sources Assessment) and the ones analysed in WP8 and presented in D8.1 (OpenScienceLink Evaluation Framework) are actually linked with these five (5) aspects.

In order to increase the sustainability potential of the OpenScienceLink platform and the services provided, the sustainability plans and the platform development works will encapsulate a series of traits which, at least partially, boost the replicability aspect. More specifically, the platform will be designed and implemented on the basis of *generability* on three axes; open (or subscription-based) access data sources, journals facilitated and domains covered. Hence, the OpenScienceLink approach will be *expandable* concerning the data sources it links with, will be applicable to a wide variety of journals and will be able to cover not only the biomedical domain, but also any other domain. The *modularity* of the platform components and services will further allow the platform *adaptability* and faster integration with other platforms or new/updated components and models. It will also allow for the easy *replacement* of mechanisms and components with new ones which will be incorporating new and/or improved functionalities. Moreover, its *independence* from the underlying data sources allows for its easy expansion and easy replacement when necessary (no longer available, of interest or of value). The co-existence of other (at least dispersed) systems performing supplemental and/or similar functionalities, such as managing journals, including the review process, evaluating published research outputs and allowing researchers to build collaboration networks, further strengthens the sustainability potential of the platform as the *integration* possibility will be investigated, exploiting this way existing user bases and synergies. The use of standardised interfaces will further boost this possibility.

2.2 Strategy for increased and engaged end users population

A key aspect of the sustainability strategy involves the actions to be made for attracting and engaging the end user population. The initial sustainability plan will include the following ones:

1. *Strong involvement of users within the Consortium*

   The project organisations will comprise the initial pool of users for the OpenScienceLink platform. Each one of these organisations has committed to disseminate the platform within their context and engage hundreds of users during the project's lifetime. The successful use of the platform by these users along with the internal dissemination activities to be held via demonstrations, presentation and information at the university's website and e-mail campaigns among others will further attract users. Partner organisations will check the possibility of adding a link to OpenScienceLink platform to their university, school, lab and library website. The expected and targeted participation of internal partner users in the platform services is presented in section 3.3.

2. *Involvement of external users*

   The Consortium will exploit their business and scientific networks in order to disseminate the platform services and attract more users. Initially, project partners will attempt to attract users from their business and research networks. Gradually, the next plans will include broad dissemination activities held by the partners individually and the Consortium as a whole in order to increase platform awareness and attract more users.

   This step is highly dependent on the dissemination and exploitation activities of the project and its success is strongly affected by their positive outcome. More specifically, the exploitation activities will thoroughly present the targeted population within the current and near future market context. These activities targeted to attract users involve the dissemination plan which includes

   - Press releases for the launching of the Biomedical Data Journal and the public release of the OpenScienceLink platform. New press releases will be prepared for each new improved version of the platform with emphasis on the new features. Press releases will be translated in all of the consortium languages (English, German, Greek, French, Bulgarian, Italian and Lithuanian).
   - Preparation of video demos showing the main features of the OpenScienceLink platform and help the user to become familiar with the different functionalities
   - Publications of deliverables and papers in Open-access repositories
   - Targeted presentations in research institutes, conferences, workshops and publications in journals
   - Presence in social networks and media

   As the clinical and biomedical experts participating in the OpenScienceLink Consortium are highly reputed scientists in their field of expertise, each one of them will be acting as research community leader in their domain. Hence, they will be actively participating in the platform scenarios and will be engaged to be using the services. With the effect of an influencer in their fields, their high activity/involvement is expected to trigger researchers into using the platform. Moreover, the OpenScienceLink experts will be sending personalised emails to their research community members and collaborators throughout the project's lifetime, notifying them about the project's works and the services status.

   Given that the purpose of the dissemination activities will be not only to raise awareness but also promote the project's outputs and results to interested stakeholders and engage the community, particular focus should be given on the preparation of material visualising the pilot services and their expected benefits in simple steps, live demonstrations of the platform and, if possible, test usage of the platform by researchers of the domain for submitting their feedback. The latter could take place either through guided use of the platform in a training-like manner or by inviting researchers to join the platform and use it for a specific period of time (e.g., 2 weeks or 30 days).

The OpenScienceLink External Users / Stakeholders Group (EUSG) (aka Special Interest Group) will also comprise an important sustainability vehicle. It is a group of external users who closely follow the project's works and are regularly updated about its developments. The different regular forms of communication will allow for the incorporation of the group participants' feedback and ideas into the project's activities and implementation outcome and, hence, increase their commitment to using the platform.

In order to maximise the sustainability potential of the services and the outcome of the related activities, the SocIoS platform will be used for identifying the major influencers in a specific scientific area or field, so that the communication efforts are targeted and effective. It should be noted that a major influencer is not necessarily a top scientist, and, for this reason, the SocIoS platform is used instead of the OpenScienceLink Pilot 5 services.

3. *Involvement of entities within the Consortium organisations*

   Given the variety and the type of the stakeholders participating in the OpenScienceLink eco-system, it is expected that different entities within the Consortium organisations could be approached for acting as users (e.g., universities could be acting as publishers through their university press) or for providing their data to be linked with the platform.

   Demonstrations of the platforms will be planned for these entities so that they become aware of the services and their potential as well as they can fully understand their role in the OpenScienceLink eco-system.

4. Connection with Libraries and Library Users across Europe

   A targeted strategy focusing on attracting platform users via libraries across Europe has been designed. According to this, connection can be established between libraries and the OpenScienceLink platform. Libraries are among the stakeholders that can use certain functionalities of the platform and this could provide a large number of new users.

5. Biomedical Data Journal (BMDJ)

   The journal is expected to boost significantly the population of registered users. BMDJ has already attracted distinguished biomedical experts from around the globe and this group will be enhanced after the official launching of the journal.

   Members of the editorial board, invited reviewers and scientists submitting their datasets for publication will be users of the platform.

In order to capture users' feedback about the services, the users of the OpenScienceLink services will be receiving questionnaires on a regular basis. Moreover, for user engagement purposes, a reputation-based reward system will be applied. More specifically, the most active researchers, both in terms of service usage and recommendation of the system to new users, will be announced on a regular basis.

2.3 Strategy for business and technological competitiveness

In order to ensure that the developed platform is competitive both from a business and a technological perspective, the following aspects will be considered:

Funding for further platform development after the project's lifetime

In order to ensure the financial viability of the platform and its continuous enhancement for purpose of competitiveness, the OpenScienceLink partners will be investigating different potential funding sources, including regional, national or EU development programs, sponsorships by interested stakeholders (such as pharma or publishers), etc. These activities strongly depend on the exploitation decisions to be made, including whether the continuation of the works will be on a partner or a collaboration basis, it will involve a spin-off or a third party involvement, etc.

Business models for the sustainable operation of the OpenScienceLink platform

The Consortium will dedicate part of its activities on developing business models with a view towards the sustainability of the platform and the services provided. The business models will cover both the data journal developed and the platform along with the services offered. In all cases, the business models will take into consideration the Consortium partners' roles (technology providers, service integrators and providers, publisher, etc.).

3 From the Sustainability Strategies to Actions

3.1 Implementation Plan

This section presents the sustainability analysis of the data journal which comprises a pilot 1 product as well as a cross-pilot analysis for the sustainability plans for the services. As this document comprises the first out of three releases of the sustainability plans, it is expected that the platform releases, the project's progress and the output of the dissemination and exploitation activities will provide valuable input for updating and enhancing the sustainability plans.

3.1.1 Sustainability analysis of the data journal (pilot 1)

A. Spendings per year

	Activity	Rough cost estimate
A0	Policies, business process, legal issues	OpenScienceLink
A1	Website and presence in social networks Initial development, software and functionality upgrades, expanding the presence in social networks	2,000
A2	Journal management 1/2 position, bachelor's degree, working knowledge of English, some understanding of biomedical issues (2,500 Euro per month, including social and other insurance, including the insurance paid by the employing company) = 12 months x 1,250 Euro per month (article processing, e.g. page setting, is included here)	15,000
A3	Printing [4] 4 issues x 1,500 Euro (4 colours cover, the usual issue is with black and white body; when necessary, individual pages /galley/ way be printed in colour; printout – between 300 and 500 copies; format – A4)	6,000
A4	Advertising the journal (online, in specialised magazines, at relevant conferences, etc.)	2,000
	Sub-total	25,000
A5	Overhead, 20 % Office space & equipment, consumables, communications, web hosting, etc.	5,000

[4] Reviewers for the first project recommended not to publish hard copies. The publisher in the consortium considered this recommendation and decided to print hard copies on the following grounds: (1) printing (and mailing) costs are constitute just over 20 % of all direct publication costs; (2) printed issues will be disseminated for free among potential stakeholders, and thus serve to advertise the journal; and (3) printing costs would be offset by printing advertisements in the journal (see item B2 below), This decision will be reviewed after the first volume of BMDJ has been published.

	Total	**30,000**
A6	Return of Investments, 20 %	6,000
A7	Required annual revenues	**36,000**

Table 29: Spendings for pilot 1

B. Possible revenues

	Sources	**Required revenues**
B1	Sale of printed copies including by subscription Euro 20 per sold copy (above packaging, posting, and transaction costs), 100 copies sold of each issue = 4 x 100 x 20	8,000
B2	Advertising in the journal	2,000
B3	Direct support by an agency or programme supporting open access	2,000
B4	Author's fees (institutional membership may provide stability and increase predictability, but is not expected to increase revenues, since it will lead to waiving authors' fees) 4 issues x 15 articles per issue in average = 60 articles **Fee of 400 Euro per article** (or an equivalent amount for an institutional membership) Remark: Fees for publications by members of the Editorial Board and 'active' reviewers may be waived. Hence, this calculation is based only on the number of articles for which authors are requested to pay the fee.	24,000
	Total	**36,000**

Table 30: Possible revenues for pilot 1

Possibilities to reduce costs:

Increase the efficiency of journal management and journal preparation

1. Assign a person with lower qualification to manage the journal (not desirable).
2. Economy of scale: Seek synergies by assigning the same person to manage three or four journals.
3. Request that authors use a dedicated writing tool (that provides the articles in print-ready form).
4. Milder form of the above requirement – provide templates in commonly used software tools and request that authors use the one they are used to.
5. Request that articles be written in a language that does not require copy-editing.
6. Provide paid services for formatting submissions to journal requirements (in case a contribution is not formatted according to journal requirements)
7. Provide paid copy-editing services for cases when a contribution is not written with acceptable quality of language.

Selected examples of author's fees for publication in open access journals:

Journal	At launch	Regular	Remark
Biodiversity Data Journal, Pensoft	0	"a minimal fee ... that anyone can afford"	Manuscripts must be written in their own 'writing tool,' or from integrated external platforms, such as Scratchpads or GBIF Integrated Publishing Toolkit
Data in Brief, *Elsevier*	250 USD	500 USD	Manuscripts must be written in a template provided by the publisher, that provides also language editing services (if necessary) at an additional cost.
Geoscience Data Journal, Wiley	n/a	$1,500	
GigaScience (~BioMed Central)	0	0	Thanks to the support by BGI
Journal of Open Public Health Data, Ubiquity Press	0	0	"covered by funding"
Genomics Data, Elsevier	$ 100	$ 500	Additional charges if formatting and copy editing is necessary
Scientific Data, Nature Publishing Group	-30%	$ 630/700	Depending on the type of Creative Commons License
Journal of Defense Management, OMICS Group	$ 1,300	$ 1,300	Do not seem to have considerable number of contributors. Members of the Editorial Board publish free of charge

Table 31: Examples of author fees for publication in OA journals

Increase revenue predictability and direct support

- Seek support by funding agencies
- Seek support by academic libraries, foundations, corporations, etc.

3.1.2 Sustainability analysis of the services

In order to realize the strategies described in the previous chapter, a series of actions which could be followed during the project's lifetime have been identified. Given the project's duration and the variety of roles among the Consortium partners (e.g., technology and service providers, researchers, legal and IPR experts, publishers, etc.), these actions are planned within the 3 years of the project and for each one of them the partners who are expected to realize them are identified. In this updated sustainability analysis, the implementation plan for 3 has been

specified, as well as some preliminary steps for the period following the project's completion (A.P.E. : After the Project's End).

Concerning the period after the project's end, sustainability plans are expected to be structured around two main axes:

a. Maintenance and/or further development of project activities and platform services based on their business potential and need project website will continue comprising an important means for the announcement of the platform releases, training material and related news.
b. Continuation and enrichment of the collaboration networks.

The sustainability plans to follow will comprise an update of the current one for year 3 as well as a thorough strategy for the after project period. Their analysis is expected to be much more thorough given that they will also take into consideration important information from the dissemination and exploitation activities.

Action	Series of Steps	Who	Related WP/Task	Consortium skills are enough (Yes/No)	Metrics Demonstrating Progress	When	Prerequisite	(M)andatory / (O)ptional
Involvement of users within the Consortium organisations	Selection of classes and laboratories to be initially targeted for students and researchers who could use the platform.	TUD, LUHS, CNR, NKUA	T6.1	Yes	Number of classes and laboratories Number of students and researchers	Year 3	None	M
	Announcement of platform services progress at the university website and through the university mailing lists.	TUD, LUHS, CNR, NKUA	T9.1	Yes	Yes/No	Year 3	Project News releases (T9.1)	M
	Inclusion of the platform link at university, lab and library website.	TUD, LUHS, CNR, NKUA	T9.1	Yes	Yes/No	Year 3	Initial Platform release (WP5)	M
	Demonstration of the platform to students and researchers.	TUD, LUHS, CNR, NKUA	T6.3/T9.1	Yes	Number of students and researchers to whom the platform was demonstrated	Year 3 A.P.E.	Initial Platform release (WP5) Preparation of Demonstration Videos (T9.1)	M
	Collection of feedback.	TUD, LUHS, CNR, NKUA	T8.2	Yes	Number of users providing feedback Number of different comments collected	Year 3 A.P.E.	Platform demonstration (T9.1) Questionnaire for feedback collection (WP8)	M

Action	Series of Steps	Who	Related WP/Task	Consortium skills are enough (Yes/No)	Metrics Demonstrating Progress	When	Prerequisite	(M)andatory / (O)ptional
	Regular communication with internal users for announcing project progress and platform releases.	TUD, LUHS, CNR, NKUA	T9.1	Yes	Number of users contacted with	Year 3 A.P.E. (for platform releases)	Project News releases (T9.1) Platform releases (WP5)	M
	Personalised news announcements based on the feedback submitted.	TUD, LUHS, CNR, NKUA	T6.1/T9.1	Yes	Number of personalised news items	Year 3 A.P.E.	Feedback collected (WP7)	O
	Monitoring of each user's activity in the platform (how often, for how long, which services).	TUD, NTUA, TI	WP7	Yes	Yes/No	Year 3 A.P.E.	Platform release (WP5) Use of platform by users (WP7)	O
	Communication with the users based on their activity in the platform (reminders when inactive for more than a period (e.g., 1 month), announcements for new features to be included in the services they use most often, etc.).	TUD, LUHS, CNR, NKUA	T6.1	Yes	Yes/No	Year 3 A.P.E.	Platform release (WP5) Use of platform by users (WP7) Monitoring of platform activity (WP7)	O
Involvement of external users	Determination of specific scientific fields to initially target at.	TUD, LUHS, CNR, NKUA	T6.4/T9.1	Yes	Number of different fields identified	Year 3	None	M

Action	Series of Steps	Who	Related WP/Task	Consortium skills are enough (Yes/No)	Metrics Demonstrating Progress	When	Prerequisite	(M)andatory / (O)ptional
	Preparation of a list of researchers, research communities and groups they will contact with based on the above fields.	ALL	T6.4	Yes	Number of identified researchers Number of identified research communities Number of identified research groups	Year 3	Determination of specific scientific fields to initially target at	M
	Preparation of a list of stakeholders for each role in the OpenScienceLink eco-system who could serve as potential users.	ALL	T6.4	Yes	Number of identified researchers Number of identified research communities Number of identified research groups	Year 3	Work in T9.3	M
	Use of the SocIoS platform for identifying the major influencers in each one of the specific scientific fields.	ALL	T9.1	Yes	Number of major influencers per field	Year 3 A.P.E.	None	M
	Decision for the communication channels to be used for contacting the external users.	ALL	T9.1	Yes	Yes/No	Year 3	None	M

Action	Series of Steps	Who	Related WP/Task	Consortium skills are enough (Yes/No)	Metrics Demonstrating Progress	When	Prerequisite	(M)andatory / (O)ptional
	Preparation of a template e-mail for the communication with the potential users.	ALL	T9.1	Yes	Yes/No (investigate need for a template per pilot and/or per scientific field)	Year 3	None	O
	Each partner contacts the potential users they have identified as well as the influencers in their specific scientific field.	ALL	T6.1/T9.1	Yes	Number of researchers approached Number of research communities approached Number of research groups approached	Year 3 A.P.E.	Preparation of list of potential contacts (previous step) (T9.1)	M
	Personalised communication with the potential users.	ALL	T6.1/T9.1	Yes	Number of researchers approached Number of research communities approached Number of research groups approached	Year 3 A.P.E.	Preparation of list of potential contacts (T9.1)	O

Action	Series of Steps	Who	Related WP/Task	Consortium skills are enough (Yes/No)	Metrics Demonstrating Progress	When	Prerequisite	(M)andatory / (O)ptional
	Presentation of the platform services to the external users.	ALL	T6.3/T9.1	Yes	Number of platform presentations to external users Number of external users participating in the presentations	Year 3 A.P.E.	Initial Platform release Preparation of Demonstration Videos	M
	Collection of feedback.	ALL	WP8	Yes	Number of users providing feedback Number of different comments collected	Year 3 A.P.E.	Platform demonstration Questionnaire for feedback collection	M
	Regular communication with users for announcing project progress and platform releases.	ALL	T9.1	Yes	Number of users contacted with	Year 3 A.P.E. (for platform releases)	Project News releases Platform releases	M
	Personalised news announcements based on the feedback submitted.	ALL	T9.1	Yes	Number of personalised news	Year 3 A.P.E.	Feedback collected	O
	Monitoring of each user's activity in the platform (how often, for how long, which services).	TUD, NTUA, TI	WP7	Yes	Yes/No	Year 3 A.P.E.	Platform release Use of platform by users	O

Action	Series of Steps	Who	Related WP/Task	Consortium skills are enough (Yes/No)	Metrics Demonstrating Progress	When	Prerequisite	(M)andatory / (O)ptional
	Communication with the users based on their activity in the platform (reminders when inactive for more than a period (e.g., 1 month), announcements for new features to be included in the services they use most often, etc.).	ALL	T6.1	Yes	Yes/No	Year 3 A.P.E.	Platform release Use of platform by users Monitoring of platform activity	O
	Communication with other projects and initiatives.	ALL	T9.1	Yes	Number of projects and initiatives approached	Year 3 A.P.E.	Platform release Use of platform by users Monitoring of platform activity	M
					Number of projects and initiatives having used the platform at least once			
					Number of users having used the platform at least once			
					Number of entities (organisations, institutes, etc) having used the platform at least once			

Action	Series of Steps	Who	Related WP/Task	Consortium skills are enough (Yes/No)	Metrics Demonstrating Progress	When	Prerequisite	(M)andatory / (O)ptional
Training of potential (both internal and external) users	Preparation of training material.	TI (primarily), ALL	T6.3	Yes	Number of different types of stakeholders the training material covers Different types of training material (i.e., videos, documents, figures, etc) : Yes/No	Year 3 A.P.E. (training material to be updated after releases, if required)	Platform release Profiling of potential stakeholders/target users (T9.2)	M
	Organisation of training events.	TI (primarily), ALL	T6.3	Yes	Number of training events Number of attendees at training events Number of countries in which the events are held (if physical) Number of countries from which the attendees come from (if web based)	Year 3 A.P.E.	Platform release Prepared training material	O

Action	Series of Steps	Who	Related WP/Task	Consortium skills are enough (Yes/No)	Metrics Demonstrating Progress	When	Prerequisite	(M)andatory / (O)ptional
					Number of different types of stakeholders covered			
Release of exploitation plan and business analysis	Market analysis.	ALL	T9.3	Yes	Yes/No	Year 3	Work within T9.3 Business and Marketing Plans	M
	SWOT analysis.	ALL	T9.3	Yes	Yes/No	Year 3		M
	Targeted customers, stakeholders and market segments.	ALL	T9.3	Yes	Yes/No	Year 3 A.P.E.		M
Dissemination plan preparation	Selection of targeted audiences.	ALL	T9.1	Yes	Yes/No	Year 3	Work within T9.1 Dissemination, Communication and Premarketing	M
	Selection of events (conferences, workshops, etc.) to participate at.	ALL	T9.1	Yes	Number of conferences Number of workshops Number of demonstrations and exhibitions Number of open access related events	Year 3 A.P.E.		M
	Selection of Blogs and Websites to present the services.	ALL	T9.1	Yes	Number of blogs Number of websites	Year 3 A.P.E.		M
	Identification of other relevant projects and initiatives for networking.	ALL	T9.1	Yes	Number of projects and initiatives	Year 3 A.P.E.		M

Action	Series of Steps	Who	Related WP/Task	Consortium skills are enough (Yes/No)	Metrics Demonstrating Progress	When	Prerequisite	(M)andatory / (O)ptional
Preparation of dissemination material	Preparation of project leaflets and brochures.	ALL	T9.1	Yes	Yes/No	Year 3	Work within T9.1 Dissemination, Communication and Premarketing	M
	Preparation of project posters.	ALL	T9.1	Yes	Yes/No	Year 3		M
	Preparation of project videos demonstrating the platform.	ALL	T9.1	Yes	Yes/No	Year 3 A.P.E. (for platform releases)		M
	Preparation of project news releases.	ALL	T9.1	Yes	Number of project news releases prepared	Year 3 A.P.E. (for platform releases)		M
Distribution of dissemination material to interested audiences	Distribution of project leaflets and brochures.	ALL	T9.1	Yes	Number of project leaflets and brochures distributed	Year 3	Work within T9.1 Dissemination, Communication and Premarketing	M
	Distribution of project posters.	ALL	T9.1	Yes	Number of project posters prepared Audience size	Year 3		M
	Distribution of project videos demonstrating the platform.	ALL	T9.1	Yes	Number of project videos demonstrating the platform Audience size	Year 3 A.P.E. (for platform releases)		M

Action	Series of Steps	Who	Related WP/Task	Consortium skills are enough (Yes/No)	Metrics Demonstrating Progress	When	Prerequisite	(M)andatory / (O)ptional
	Distribution of project news releases.	ALL	T9.1	Yes	Number of project news releases sent out (audience size)	Year 3 A.P.E. (for platform releases)		M
External Users / Stakeholders Group (EUSG) (aka Special Interest Group) involvement	Determination of the full OpenScienceLink eco-system.	ALL	T9.3	Yes	Yes/No	Year 3	Work in T9.3	
	Preparation of a list of stakeholders for each role in the OpenScienceLink eco-system who could join the EUSG (it is expected to be a sub-list of the external users list, including the ones resulting from the SocIoS platform analysis).	ALL	T9.3	Yes	Number of potential EUSG members	Year 3	Work in T9.1, T9.2	
	Each partner contacts the potential members of the EUSG based on their specific scientific field and/or their expertise (researcher, publisher, etc.).	ALL	T9.3	Yes	Number of potential EUSG members approached	Year 3	Work in T9.2	
	Signing a Memorandum of Understanding (MoU) with each interested party.	ALL	T9.2	Yes	Yes/No	Year 3	Work in T9.2	O

Action	Series of Steps	Who	Related WP/Task	Consortium skills are enough (Yes/No)	Metrics Demonstrating Progress	When	Prerequisite	(M)andatory / (O)ptional
	Communication at least once with the EUSG during requirements analysis and use cases specification for feedback collection (incorporation of their comments into the new platform release and close monitoring of the project's activities will increase engagement).	ALL	T9.2	Yes	Yes/No	Year 3	Work in T9.2	M
	Presentation of the platform services to the members after each major platform release (focusing on the new features).	ALL	T6.3/T9.1	Yes	Number of EUSG users participating in the presentations	Year 3	Initial Platform release Preparation of Demonstration Videos	M
	Collection of feedback.	ALL	WP8	Yes	Number of EUSG users providing feedback Number of different comments collected	Year 3	Platform demonstration	M
	Regular communication with EUSG users for announcing project progress and platform releases.	ALL	T9.1	Yes	Number of users contacted with	Year 3	Project News releases Platform releases	M

Action	Series of Steps	Who	Related WP/Task	Consortium skills are enough (Yes/No)	Metrics Demonstrating Progress	When	Prerequisite	(M)andatory / (O)ptional
	Investigation of the potential for using the EUSG members' network of collaboration for further enriching the EUSG and/or increasing the external users.	ALL	T9.1	Yes	Number of users contacted with	Year 3	None	M
Feedback Collection	Preparation of questionnaires for feedback collection.	ALL	WP8	Yes	Yes/No (1 questionnaire per pilot is expected)	Year 3 A.P.E. (for platform releases)	None	M
	Distribution of questionnaires to platform users.	ALL	WP7	Yes	Number of questionnaires distributed per pilot Number of responses collected per pilot	Year 3 A.P.E. (for platform releases)	Preparation of questionnaires Platform releases Demonstration of platform services	M
	Analysis of the feedback and respective platform enhancements.	ALL	WP2 WP3 WP4 T5.4	Yes	Percentage of collected comments which were transformed into platform modifications (including additions)	Year 3 A.P.E. (for platform releases)	Platform use Questionnaire distribution	M

Action	Series of Steps	Who	Related WP/Task	Consortium skills are enough (Yes/No)	Metrics Demonstrating Progress	When	Prerequisite	(M)andatory / (O)ptional
Demonstration of platform to entities within the consortium organisations	Identification of organisation entities which could be approached (e.g., university press, library, etc.).	Initially: TUD, NKUA, CNR, LUHS Gradually: ALL	T6.1	Yes	Number of different entities identified Number of different roles covered in the OpenScienceLink ecosystem	Year 3	None	M
	Communication with the identified entities.	Initially: TUD, NKUA, CNR, LUHS Gradually: ALL	T6.1	Yes	Number of different entities the Consortium contacted with Number of different roles covered in the OpenScienceLink ecosystem by these entities	Year 3	Identification of the internal organisational entities	M
	Presentation and/or Demonstration of the platform services.	Initially: TUD, NKUA, CNR, LUHS Gradually: ALL	T6.1, 9.1	Yes	Number of entities to which the platform was presented and/or demonstrated	Year 3	Prior communication with the entities Platform release (WP5)	M
	Determination of the specific role the entities could be serving.	Initially: TUD, NKUA, CNR, LUHS Gradually: ALL	T6.1	Yes	Yes/No	Year 3	Determination of the OpenScienceLink ecosystem (T9.3)	

Action	Series of Steps	Who	Related WP/Task	Consortium skills are enough (Yes/No)	Metrics Demonstrating Progress	When	Prerequisite	(M)andatory / (O)ptional
Rewarding participation	Monitoring of users activities in the platform.	TUD, NTUA, TI	WP7	Yes	Yes/No	Year 3 A.P.E. (for platform releases)	Platform use (WP7)	M
	Announcing the top 20 active scientists of the month by presenting their short CV (reward through publicity).	ALL	WP7	Yes	Yes/No	A.P.E. (for platform releases)	Platform use (WP7)	M
	Investigation of other motives for ensuring and/or boosting user attraction and engagement.	ALL	WP7	Yes	Yes/No	Year 3 A.P.E. (for platform releases)	Platform use (WP7)	M
Ensuring Financial Viability after the project's lifetime	Estimation of post-project operation and maintenance (O&M) costs	ALL	T9.3	Yes	Yes/No	Year 3 A.P.E. (for platform releases)	Market analysis Exploitation planning	M
	Decision about the pricing scheme to be followed	ALL	T9.3	Yes	Yes/No	Year 3 A.P.E. (for platform releases)	Market analysis Exploitation planning Costs analysis and estimation	M

Action	Series of Steps	Who	Related WP/Task	Consortium skills are enough (Yes/No)	Metrics Demonstrating Progress	When	Prerequisite	(M)andatory / (O)ptional
	Investigation of the affordability of the services for the different stakeholders	ALL	T9.3	Yes	Yes/No	Year 3 A.P.E. (for platform releases)	Market analysis Exploitation planning Costs analysis and estimation Pricing scheme	M
	Investigation of different funding sources, including grants, sponsorships, internal funding, crowdfunding, etc.	ALL	WP9	Yes	Number of funding sources Potential funding size	Year 3 A.P.E. (for platform releases)	Market analysis Exploitation planning	M
	Continuous investigation for funding opportunities.	ALL	WP9	Yes	Yes/No	Year 3 A.P.E. (for platform releases)	Market analysis Exploitation planning	M
	Determination of the exploitation vehicle (e.g., individual exploitation, third party, spin-off company, etc.).	ALL	WP9	Yes	Yes/No	Year 3	Market analysis Exploitation planning	M
Ensure contextual adaptation	Continuous monitoring of policies and legal framework which may affect the project's goals and the pilot services	ALL	T3.5, T9.3	Yes	Number of providers identified	Year 3 A.P.E. (for platform releases)	Work in T3.5, T9.3	M

Action	Series of Steps	Who	Related WP/Task	Consortium skills are enough (Yes/No)	Metrics Demonstrating Progress	When	Prerequisite	(M)andatory / (O)ptional
Establish synergies with information/data providers	Identification of information/data providers who are considered highly relevant to the OpenScienceLink goals and platform potential	ALL	T9.1, T2.2	Yes	Number of providers identified	Year 3 A.P.E. (for platform releases)	Work in T9.1, T9.2	M
	Communication with the identified providers	ALL (preferably based on their background)	T9.1, T9.2	Yes	Number of providers conducted with	Year 3 A.P.E. (for platform releases)	Work in T9.1, T9.2	M
	Investigation of the potential type(s) of synergies to be established (e.g., member of the users network, coalition, customers, partnership, etc)	ALL	T9.1, T9.3	Yes	Yes, No	Year 3 A.P.E. (for platform releases)	Work in T9.1, T9.3	M
Development of an exit (phase-out) strategy	Decision about the exploitation vehicle and, consequently, about the hosting of the pilot services	ALL	T9.3	Yes	Yes / No	Year 3 A.P.E. (for platform releases)	Work in T9.3	M
	Decision about the project's deliverables and outputs which should be maintained for supporting the pilot services	ALL	T9.3	Yes	Yes / No	Year 3 A.P.E. (for platform releases)	Work in T9.3	M

Action	Series of Steps	Who	Related WP/Task	Consortium skills are enough (Yes/No)	Metrics Demonstrating Progress	When	Prerequisite	(M)andatory / (O)ptional
	Polishing and formalisation of the project's deliverables and outputs which will be supporting the pilot services	ALL	T6.3, T9.1, T9.3	Yes	Yes / No	Year 3 A.P.E. (for platform releases)	Work in T6.3, T9.1, T9.3	M
	Final decisions about licencing and IPR issues	ALL	T9.3	Yes	Yes / No	Year 3 A.P.E. (for platform releases)	Work in T9.3	M

Table 32: Implementation Plan of Initial Sustainability Activities

3.2 Revising the Sustainability Plan

The Consortium will officially revise the sustainability plan twice within the project's lifetime (M15 and M27). However, given its strong dependence with the exploitation and dissemination activities of the project as well as the platform's evaluation and validation works, sustainability activities will take place across the project's lifetime. Hence, the sustainability plans document is considered to be a *live document* throughout the project. NTUA is responsible for its editing and finalisation. Nevertheless, in order to ensure that the sustainability plans are not at risk of becoming obsolete and stopping being used, each partner should and will contribute to the sustainability plans according to their expertise and role.

3.3 Resource Requirements

This section summarises the resources that are needed in order to carry out the sustainability plan strategies.

TUD (BIOTEC) Sustainability Figures	**2016**	**2017**	**2018**	**2019**	**2020**
Total Number of (Internal) Registered Users (Researchers)/ Total Active Ones	125/100	180/150	225/190	275/240	310/280
Promotion costs	10000€	10000€	5000€	5000€	5000€
Additional Development Costs	15000€	15000€	15000€	5000€	5000€
Growth in volume of generated content	5%	8%	10%	10%	10%

Table 33: Estimated Sustainability Figures for TUD (Biotechnology Center), for the period after the end of the project.

TUD (Uniklinikum and BCube) Sustainability Figures	**2016**	**2017**	**2018**	**2019**	**2020**
Total Number of (Internal) Registered Users (Researchers)/ Total Active Ones	60/50	90/75	110/95	135/120	155/140
Promotion costs	5000€	5000€	3000€	3000€	3000€

TUD (Uniklinikum and BCube) Sustainability Figures	2016	2017	2018	2019	2020
Additional Development Costs	8000€	8000€	8000€	4000€	4000€
Growth in volume of generated content	5%	7%	7%	8%	10%

Table 34: Estimated Sustainability Figures for TUD (Uniklinikum and BCube), for the period after the end of the project.

LUHS Sustainability Figures	2016	2017	2018	2019	2020
Total Number of (Internal) Registered Users (Researchers)/ Total Active Ones	230/160	280/210	300/250	330/290	370/320
Promotion costs	7000€	7000€	3000€	2000€	2000€
Additional Development Costs	2000€	2000€	2000€	1000€	1000€
Growth in volume of generated content	5%	7%	7%	8%	10%

Table 35: Estimated Sustainability Figures for LUHS, for the period after the end of the project.

NKUA Sustainability Figures	2016	2017	2018	2019	2020
Total Number of (Internal) Registered Users (Researchers)/ Total Active Ones	200/150	300/220	400/320	450/380	500/400
Promotion costs	6000€	5000€	3000€	1000€	1000€

NKUA Sustainability Figures	2016	2017	2018	2019	2020
Additional Development Costs	3000€	2000€	2000€	1000€	1000€
Growth in volume of generated content	5%	10%	15%	20%	20%

Table 36: Estimated Sustainability Figures for NKUA, for the period after the end of the project.

CNR Sustainability Figures	2016	2017	2018	2019	2020
Total Number of (Internal) Registered Users (Researchers)/ Total Active Ones	240/200	270/230	300/260	320/280	340/300
Promotion costs	6000€	6000€	3000€	2000€	2000€
Additional Development Costs	2000€	2000€	2000€	1000€	1000€
Growth in volume of generated content	5%	10%	15%	20%	20%

Table 37: Estimated Sustainability Figures for CNR, for the period after the end of the project.

TI Sustainability Figures	2016	2017	2018	2019	2020
Total Number of (External) Registered Users (Researchers)/ Total Active Ones	120/100	170/130	200/160	250/220	300/250
Promotion costs	5,000 €	4,000 €	2,000 €	2,000 €	2,000 €
Additional Development Costs	3,000 €	3,000 €	1,000 €	1,000 €	1,000 €

TI Sustainability Figures	2016	2017	2018	2019	2020
Growth in volume of generated content	5%	6%	6%	8%	8%

Table 38: Estimated Sustainability Figures for TI, for the period after the end of the project.

4 Conclusion

This report serves as the final sustainability plans for the OpenScienceLink platform. It presented the overall market into which the platform and its services are positioned, the competitors and how their products relate to the ones developed within this project and a comparison of the OpenScienceLink pilot services with these products. Moreover, it presented a series of entity types and stakeholders who are expected to use the platform and the expected benefits they should have. The final strategy to be followed for achieving the sustainability objectives has been presented as well as a thorough implementation plan focusing on the year 3 of the project, but mainly focusing on a set of actions to be undertaken after the project's end.

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