OpenAIRE: Supporting the H2020 Open Access Mandate

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Abstract. This paper will focus on the practices used by the OpenAIRE Cyprus National Open Access Desk as part of a pan-European network, for the implementation of the European Union's vision and policies for Open Science and Open Access to knowledge. Furthermore, the purpose of this paper is to present the scope, the role and the actions of the European Project OpenAIRE – Open Access Infrastructure for Research in Europe, which since 2009 is working towards the support of the European Commission's policies for Open Science. By definition "Open Science represents a new approach to the scientific process based on cooperative work and new ways of diffusing knowledge by using digital technologies and new collaborative tools. The idea captures a systemic change to the way science and research have been carried out for the last fifty years: shifting from the standard practices of publishing research results in scientific publications towards sharing and using all available knowledge at an earlier stage in the research process [1]".

Keywords. open science, Open Access, OpenAIRE, Horizon2020, Cyprus NOAD

1. Introduction

In the past few years, research in Cyprus has increased considerably due to the integration of the country into the European Union. The establishment of six more universities, both public and private, in addition to the University of Cyprus that already existed, has also contributed to this increase. The main funder of research in Cyprus is the EU, which has supported research by providing the majority of the funding. Horizon2020 found the research community of Cyprus to be supported by €73.608.521 (234 participations) [2], a considerably important amount for a member state struggling with economic difficulties. Since the EU has given a significant boost to research activity nationally by being the primary funder of research, its role is considered particularly important for further support of research both for researchers and the organizations that employ them. Having this in mind the policies announced regarding the research frameworks of the European Union, find Cyprus following and implementing any necessary actions for compliancy. Since Open Science and Open Access is one of the main policies of the EU [3], Cyprus had to establish and implement all the necessary infrastructure towards the successful support of these policies. Of course there are still a lot of things to work on, (e.g. promoting the benefits, linking Open Access to evaluation process, ethical issues etc.) but the influence of

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European champions of Open Access and all local relevant activities are expected to achieve the adoption of "Open Science Culture".

2. The EU Funded Projects for the Support of the Implementation of Open Access Policies

A project for Open Access Infrastructure for Research in Europe – OpenAIRE[2] launched in December 2009 as one of the largest funded project of the European Union. OpenAIRE aimed to support the implementation of Open Access in Europe. Its main scope was to provide the means to promote and realize the widespread adoption of the Open Access Policy, as set out by the ERC Scientific Council Guidelines for Open Access and the Open Access pilot launched by the European Commission. OpenAIRE was a three-year project, that established the infrastructure for researchers for their support in complying with the EC OA pilot and the ERC Guidelines on Open Access. It also provided an extensive European Helpdesk System, based on a distributed network of national and regional liaison offices in 27 countries, to ensure localized help to researchers within their own context. The OpenAIRE portal was built and e-Infrastructure for the repository networks and exploration of scientific data management services together with 5 disciplinary communities was created. It also provided a repository facility for researchers who did not have access to an institutional or discipline-specific repository. The importance of the subject, lead to two additional subsequent projects. 2011-2014 saw the project OpenAIREplus – 2nd Generation of Open Access Infrastructure for Research in Europe. A 30 month project, funded by the EC 7th Framework Programme, was extending the mission further to facilitate access to the entire Open Access scientific production of the European Research Area, providing cross-links from publications to data and funding schemes. This large-scale project brought together 41 pan-European partners, including three cross-disciplinary research communities. The project capitalised on the successful efforts of the OpenAIRE project which was rapidly moving from implementing the EU Open Access Pilot project into a service phase, enabling researchers to deposit their FP7 and ERA funded research publications into Open Access repositories. The publication repository networks expanded to attract data providers from domain specific scientific areas. Innovative underlying technical structures was deployed to support the management of and inter-linking between associated scientific data. Access to and deposit of linked publications via the OpenAIRE portal was supported by the Help Desk, and OpenAIRE's collaborative networking structure extended to promote the concept of open enhanced publications among user communities. Liaison offices in each of the project's 31 European countries worked to support the needs of researchers in Europe. The project also actively contribute to the international discussion for common standards, data issues and interoperability on a global level.

A year after the beginning of the European Commission's (EC) Horizon 2020 (H2020) Research Framework Programme, OpenAIRE entered a new phase of funding with a continuation project. OpenAIRE2020, started in January 2015 and until mid-2018 it will work towards the implementation of the H2020 Open Access policy for publications, being one of the key European infrastructures supporting the H2020 Open Research Data Pilot. OpenAIRE is a Pan-European project with a well-established

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[2] https://www.openaire.eu/

network of 50 organizations, all Europe's member states and beyond. OpenAIRE supports the European Commission Open Access policy by providing infrastructure for researchers to comply with the corresponding requirements for Open Access to research results. Other activities of the project include: the collaboration with the national funders for reinforcing the infrastructure's research analytic services; an APC Gold OA pilot for FP7[3][4] publications with collaboration from LIBER [13; novel methods of review and scientific publishing with the involvement of hypotheses.org[4] [4;, a study and a pilot on scientific indicators related to open access with CWTS's [12] assistance; legal studies to investigate data privacy issues relevant to the Open Data Pilot; and international alignment with related networks elsewhere with the involvement of COAR [11].

2.1. National Open Access Desks Network

Accepting the statement that "Open Access is global – but implementation is local, and consequently European diversity requires extensive knowledge of national research practices, languages, administrative procedures and technical infrastructures [4]" OpenAIRE established a reference point in every member state and associate country. 37 pan-European advocacy nodes, known as National Open Access Desks (NOADs), have among others, the task to reach out to researchers and project coordinators of EC-funded projects to inform them of the EC OA mandate and to align their local infrastructures with a common European platform. The European Commission, as one of the most significant funders of research and facilitator of collaborative and cross-disciplinary scientific activities, required beneficiaries of its previous funding programme, the 7th Framework Programme (FP7) to make their best effort to ensure OA to peer-reviewed articles (Open Access pilot). Its new funding programme, Horizon2020, with the investment of nearly 80 billion Euros into competitive research includes the mandate of the publication output of all EC-funded projects be made open. Furthermore, OpenAIRE supports the Open Research Data Pilot and mandate which aims to maximize access to and re-use of research data generated by projects. A post-project Gold Open Access Pilot is in implementation (until April 2017), and other scholarly communication topics such as peer review and metrics are explored. The project also supports efforts of individual partner countries for national Open Access initiatives and OA Policies. The perspective of the Cyprus NOAD participation in the project is reported in this paper.

3. Cyprus as a National Open Access Desk

Cyprus via the University of Cyprus Library, has been participating in OpenAIRE since the beginning of the project in 2009. The main objectives of a NOAD are among others to support, promote and disseminate all relevant information regarding the policies of Open Access to all possible stakeholders. Cyprus achieved this by establishing a collaboration mechanism among researchers, institutions, funding organizations, EC National Reference Points, repository managers, librarians and the librarians

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[3] https://postgrantoapilot.openaire.eu/
[4] https://www.openaire.eu/hypotheses.org

association – a real human network. Three parallel approaches are in continuous process for this achievement.

I.   Central approach: Cooperation with the Research Promotion Foundation and the Directorate General for European Programmes, Coordination and Development (the local NPRs for OA) in order to forward informative material via email for Open Access & OpenAIRE project. During the last two years this cooperation along with the creation of the OA working group, has played an important role to the implementation of the National OA policy.

II.   Cluster approach: a) Co-organize/Participate in conferences of librarians/information scientists who acted as multipliers because they were able to disseminate the obligation derived by H2020 projects to their institutional researchers. b) Identification and participation with posters or papers in conferences / information days that took place in our region through which researchers were reached.

III.   Individual approach: Emails to the Cypriot coordinators/partners of SC39 FP7 and H2020 projects and phone calls were answered for questions & help requests.

3.1. Relevant EU Projects Involvement

In conjunction with participation in the OpenAIRE network, Cyprus NOAD had use the expertise and the advocacy material produced by completed and acting relevant projects such as the RECODE - Policy (RECommendations for Open Access to Research Data in Europe) [5], PASTEUR4OA - (Open Access Policy Alignment Strategies for European Union Research)[6] (acted also as Key Node), FOSTER - (Facilitate Open Science Training for European Research) [7] (hosted training event). Cyprus NOAD is working for the fulfillment of all the above mentioned tasks. Resulting, in Cyprus, of all three repositories being compliant with the European infrastructure, so that all local researchers could have the possibility to deposit to an OpenAIRE compliant repository. Apart from the local infrastructure OpenAIRE provides Zenodo. Zenodo [8] a catch-all repository for EC funded research created by CERN, an OpenAIRE partner. Among others, Zenodo helps researchers deposit their research output (publication or data) and fulfil their obligations to their funders. They are also able to receive credit by making the research results citable and through OpenAIRE, integrate them into existing reporting lines to funding agencies like the European Commission. Citation information is also passed to DataCite and onto the scholarly aggregators.

4. The Implementation of the Cyprus National Open Access Policy

Open Access and open science awareness activities are also part of the NOADs [4] tasks. In Cyprus, activities are taking place around the year but especially during the International Open Access week, where usual dissemination activities take the form of one or two days conference, webinars, focused meetings etc. Important work has been done for the coordination of the Cyprus Open Access working group. The outcome of the excellent collaboration between the different stakeholders involved in the Working Group for Open Access (consisting of the National Point of Reference for Open

Access, namely the Directorate General for European Programmes, Coordination and Development, the Research promotion foundation, local academic institutions and research funders), coordinated by the OPENAIRE2020 Cyprus NOAD (University of Cyprus Library), and highly supported by the coordinators of the project PASTEUR4OA (Open Access Policy Alignment Strategies for European Union Research), was the approval of the document for the National policy for Open Access [9]. On the 25th of February 2016, the Council of ministers of the Republic of Cyprus, had finally approved the adoption of the National policy for Open Access in Cyprus.

The National policy provides guidelines and support for the implementation of Open Access for research outputs that are funded locally, aligned with the European policies and based on the already established infrastructure at European level (e.g. OpenAIRE).

Several activities are taking place in Cyprus in order to support the adoption of the national policy and ensure the success of its implementation. For example, the new funding schema of the National research funder "Restart 2016-2020"[5], announced late-2016, included the requirement for Open Access to Research outputs of the projects funded by the National Research Promotion Foundation [2]. Compliance of the researchers with the national open access policy, cannot yet be reported. Institutional policies will be the next step in order to be aligned to the European and National policy.

5. Conclusion

Open Access to research results is an essential part of Open Science, which aims to make science more reliable, efficient and responsive, in order to enforce innovation opportunities. Openness also improves the reproducibility of research results and it might introduce new and perhaps unexpected audiences to a researcher's work [10]. For Cyprus, as a small island, research and innovation is a crucial asset. Keeping in mind that findable, accessible, interpretable and re-usable (FAIR) knowledge is essential for the public sector, the financial sector, innovative businesses, academia and citizens –which all have an essential part to play in order to invent further and new aspects of knowledge – adopting and implementing all relevant policies and tools for the successful establishment of the "Open science culture" will only benefit Cyprus and Europe as a whole. OpenAIRE is important infrastructure that has played and will continue to play a key role in these strategic subject and local infrastructures via its local NOAD.

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