1. Introduction

This briefing paper introduces the network – Knowledge Net – established as part of the PASTEUR4OA project framework. It describes the Knowledge Net’s aim, objectives and achievements since the PASTEUR4OA project started. And, as the PASTEUR4OA project draws to an end, it discusses the Knowledge Net’s future activity plans.

2. Background

The Knowledge Net has been developed as part of the Open Access Policy Alignment Strategies for European Union Research (PASTEUR4OA) project¹. PASTEUR4OA is an FP7 project that has been implemented by 15 partners representing 10 European countries. The project’s core aims involved:

- Increasing national and institutional policymakers’ as well as research funders understanding and awareness about Open Access (OA);
- Helping policymakers to develop and/or reinforce OA strategies and policies at the national, institutional and funder levels that align with the European Commission's (EC) Recommendation on Access to and Preservation of Scientific Information² issued in 2012 and the Horizon 2020 (H2020) OA mandate³;
- Facilitating coordination among all EU Member States and Aligned Countries by establishing a network of expert organisations across Europe – the Knowledge Net⁴.

To achieve its core aims, in particular the facilitation of coordinated activities, PASTEUR4OA engaged in the following activities:

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1 PASTEUR4OA, http://www.pasteur4oa.eu/home
4 The Knowledge Net is composed by 33 Key Node organisations.
PASTEUR4OA’s Knowledge Net
Working Together to Promote Open Access Policy Alignment in Europe

- Identified Key Node organisations in EU Member States and in Aligned Countries5;
- Established the network of Key Node organisations – Knowledge Net – that work collaboratively to monitor and champion an aligned policy environment across Europe in the long-term;
- Hosted a Europe-wide project meeting of national experts with the Key Node organisations6;
- Identified policymakers in each country and developed a programme of engagement that supports the development of coordinated and aligned strategies for OA policy implementation;
- Facilitated policymaker engagement through a series of workshops for funders and institutions7;
- Developed tailored advocacy resources for policymakers8.

3. The Knowledge Net

This section highlights the mission, objectives, structure and achievements of the Knowledge Net since its foundation under the PASTEUR4OA project.

3.1 Mission & Objectives

The Knowledge Net’s mission is centred on the principles of promoting the development, implementation and reinforcement of OA policies that are in alignment with the EC’s Recommendation of 2012 and the H2020 OA mandate.

The Knowledge Net promotes these principles by supporting cooperation between national experts – Key Nodes – and by coordinating activities that will inform the engagement with national policymakers (governments, institutions and funders). The Key Nodes have been raising national policymakers’ awareness about OA, sharing best practices, providing individually-tailored advice and support on policymaking, and disseminating advocacy resources. These activities should inform the development and/or reinforcement of aligned OA policies in the Knowledge Net member states.

3.2 Structure

To establish and promote a cohesive working relationship between the PASTEUR4OA project consortium and the Key Node organisations, a regional structure approach was followed for the management of the Knowledge Net. This approach reflects the perceived level of awareness and commitments towards OA across distinct European regions (which encloses a total of 33 countries) but also the levels of OA policy development in each region (based on the number of OA policies already in place in the countries representing each region). Accordingly, five distinct regional working groups were formed: East, Nordic, North West, South East and South West Europe9. Each regional group has been coordinated by a PASTEUR4OA partner (named as Regional

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5 Each Key Node represents an open access and scholarly communications expert organisation from a European country, a total of 33 Key Nodes represent 33 European countries.
6 Synthesis report of Europe wide project meeting of national experts, http://goo.gl/67LWE1
7 PASTEUR4OA regional workshops, http://goo.gl/lld7P3
8 PASTEUR4OA advocacy resources, http://goo.gl/64Cwex
9 PASTEUR4OA Key Nodes, http://www.pasteur4oa.eu/key-nodes
Coordinator) that acts as a liaison between its region and the project. This structure has facilitated a close engagement with all the Key Nodes and the effective management and implementation of the agreed activities.

3.3 Achievements

In 2014, PASTEUR4OA hosted a Europe-wide meeting of national experts that brought together the project consortium and Key Nodes representing a total of 33 European countries. The meeting aimed to inform participants about issues related to OA policy formulation, compliance and alignment as well as to share best practices. The meeting also sought to promote the establishment of supportive and constructive relationships between multiple European stakeholders through the nascent Knowledge Net. Moreover, this meeting provided the opportunity for national experts to identify and map the challenges that have been acting as barriers to advance OA. Some of the most pertinent challenges identified by national experts included: low levels of awareness about OA by policymakers in their countries; OA being a low priority in the agenda of many institutions and funders; unawareness about how to develop effective OA policies; lack of information about how to monitor OA policy compliance effectively; and complex and diverse OA policy landscape with policies expressing distinct requirements. As a result of the meeting, it was also observed that countries within each region often share similar challenges in advancing OA and they often also experience similar levels of OA policy development.

Importantly, the meeting of national experts provided the groundwork for PASTEUR4OA and Key Nodes to start promoting OA policy development, implementation and alignment. Through its regional structure, PASTEUR4OA Regional Coordinators and the Key Nodes discussed and agreed on activities that have been undertaken to raise awareness about OA and to provide advice on effective policy development, monitoring and alignment. General and tailored resources have been developed and provided to policymakers to give them insights on how to address infrastructure needs, economic constraints and information gaps (on issues such as copyrights, metrics, research data, responsible research, and article processing charges)\(^\text{10}\). In addition, information, support and training was also delivered to national policymakers via a series of tailored regional workshops targeted to research performing organisations and to research funders\(^\text{11}\).

As a result of the guidance provided by the PASTEUR4OA project partners and the Key Nodes to national policymakers, significant advances have been made in three key areas:

- Facilitation of preliminary discussions on OA policymaking;
- Providing support towards the development of effective OA policies;
- Contributing to the revision, reinforcement and/or alignment of OA policies.

3.3.1 Facilitation of preliminary discussions on OA policymaking

On the first key area, facilitation of preliminary discussions on OA policymaking, PASTEUR4OA and the Key Nodes have facilitated preliminary discussions on OA policymaking with institutions, funders and governments from various European countries. These preliminary policy discussions have sought to raise national challenges.
policymakers’ awareness about OA and to encourage them to develop OA policies. These preliminary discussions were promoted in meetings attended by PASTEUR4OA and/or Key Nodes with relevant stakeholders (government’s departments for education and science, national funders, academic institutions, national OA working groups); in presentations delivered in OA-related events; at the PASTEUR4OA regional workshops; and through direct communications where advocacy materials, tailored information and advice was provided to policymakers.

As a result of the activities undertaken, developments have been observed both in countries that are new to OA but also in countries that are generally more familiar with OA but where there are still low numbers of OA policies in place. In East (for example Czech Republic, Hungary, Latvia, Romania and Slovakia), South East (for example Bulgaria and Greece) and South West (for example Malta) European regions, PASTEUR4OA’s Regional Coordinators and the Key Nodes have taken active roles in promoting OA, in setting up or taking an active role in OA working groups, in disseminating and often translating PASTEUR4OA advocacy resources, and, importantly, in starting discussions with funders, institutions and governments on the development of OA policies.

In South West Europe, for example, the Maltese Key Node has taken an active role, with the support of the PASTEUR4OA Regional Coordinator (UMinho), in informing the discussions that led to the development of the University of Malta’s draft OA policy. In East Europe, the Czech Republic’s Key Node used the PASTEUR4OA institutional OA policy guidelines in discussions with the Vice-Rector of the Technical University of Ostrava to inform the implementation of an OA policy recommendation (adopted in December 2015) and which will subsequently inform the implementation of this University’s OA mandate. In South East Europe, the Greek Key Node active engagement with national stakeholders has resulted in academic institutions becoming more aware of OA and considering what steps need to be taken to develop OA policies. One successful example has been the International Hellenic University that has recently adopted an OA policy.

In some East (Bulgaria) and South East (Hungary, Romania and Slovakia) European countries, the Key Nodes have been actively involved in the processes that will culminate in the adoption of national OA policies. Also in these cases, PASTEUR4OA resources and the Regional Coordinators support has been key for multiple stakeholders to discuss the formulation of national OA policies. In Serbia (South East) and Latvia (East), the Key Nodes are advising and working closely with their Ministries of Science and Education to establish OA policies.

Similarly, in East (Croatia, Czech Republic, Latvia, Lithuania, Slovakia) and South East Europe (Bulgaria, Greece, Serbia, Macedonia) research funders, vice-rectors and academics are being informed about OA and discussions are starting to take place on the rationale for and how to develop funders and institutional OA policies. For example, the PASTEUR4OA regional workshops in East and South East Europe have been attended by 72 and 50 participants respectively, representing presidents, vice-rectors and academics from institutions as well as representatives from funding agencies.

It is however not only in countries that are newcomers to OA where information is being disseminated and discussions are being held to raise awareness and promote OA policy development. In Nordic (for example Iceland), North West (for example Belgium, France, Germany) and South West Europe (for example Italy, Portugal, Spain), Key Nodes are also championing and stimulating OA policy development at either the

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institutional or funders levels. This results from the fact awareness about OA is still not widespread and that more OA policies are still needed. For example, the PASTEUR4OA workshops in the Nordic, North West or South West regions were attended by a total of 21 institutions and 18 funders that still do not have OA policies in place. These regional workshops have therefore been tailored to address both the needs of organisations where OA policies are not in place (for example by explaining how to design and implement effective OA policies) and of organisations where OA policies are already in place but which are outdated and need to be revised, reinforced, monitored and that could also benefit from becoming aligned with the H2020 OA mandate.

3.3.2 Providing support towards the development of effective OA policies

On the second key area, providing support towards the development of effective OA policies, PASTEUR4OA project partners and the Key Nodes have been actively engaged in supporting the development of new OA policies. They have been doing so by providing tailored advice and information on policy formulation as well as by providing feedback, both directly and through public consultations, on draft policies.

For example, the North West Regional Coordinator (EOS) and Key Node have worked jointly in the development of the University of Luxembourg’s OA policy. In East Europe, the Key Nodes for Croatia and Latvia have both worked with the Regional Coordinator (EIFL) in the development and implementation of the Rudjer Boskovic Institute and the University of Latvia OA policies.

In South West Europe, the Regional Coordinator (UMinho) has worked closely with the Foundation for Science and Technology in the development, implementation and also the process to start monitoring the new OA policy. In North West Europe, the Regional Coordinator (EOS) and the Key Node are also working closely with Luxembourg’s National Research Fund to support the development of its OA policy. The Regional Coordinator (EOS) has also assisted the Belgian Federal Science Policy Office to revise and draft its proposed OA policy. In East Europe, the Regional Coordinator (EIFL) has worked closely with the Key Nodes from Lithuania and Estonia in supporting the development of the Lithuanian Research Council and the Estonian Research Council OA policies, whilst also submitting feedback on the public consultation for the Lithuanian policy.

In South East Europe, the Regional Coordinator (UMinho) worked closely with the Key Node and the National OA Working Group in drafting a national OA policy which is currently undergoing public consultation. In the Nordic countries (CRISTin), the Key Nodes for Norway and Sweden have contributed to the processes of writing and providing evidence-based information as well as feedback to the respective ministries on the national OA policy proposals. Similarly, in East Europe, the Regional Coordinator (EIFL) and the Key Node have actively contributed to the formulation of the Slovenian national strategy for OA and in submitting feedback on the policy through the public consultation.

3.3.3 Contributing to the revision, reinforcement and/or alignment of OA policies

On the third key area, contributing to the revision, reinforcement and/or alignment of OA policies, PASTEUR4OA project partners and the Key Nodes have also been championing the revision and alignment of existing OA policies. PASTEUR4OA has created resources explaining how policymakers can develop effective
OA policies\textsuperscript{13} and explaining the importance of aligning policies\textsuperscript{14}. These resources have been disseminated to Key Nodes and national stakeholders and have been shared online and presented in regional workshops and in other conferences.

More specifically, Regional Coordinators and Key Nodes have been discussing with institutions and funders the necessity for out-of-date or ineffective OA policies to be revised and reinforced. For example, in South West (for example Portugal) and South East (Turkey) Europe, the Key Nodes have been working with institutions in promoting the revision and reinforcement of their OA policies (which are out-of-date or do not provide sufficient information and detail to enforce compliance) as well as in promoting their alignment with the H2020 OA mandate. The Portuguese and Turkish Key Nodes have undertaken these activities by contacting institutions directly and by disseminating information in workshops and webinars\textsuperscript{15}. In the North West and Nordic regions, where some of the OA policies have been in place for a longer period of time, there is also a need to further encourage institutions and funders to reinforce policies, particularly in the cases where policies only take the form of recommendations or do not enclose important policy requirements such as to deposit articles, to not allow waivers for deposit, to link deposit with research evaluation, to make deposited articles OA and, among other, to specify clear embargo periods and applicable licences.

Similarly, PASTEUR4OA project partners and Regional Coordinators have been informing Key Nodes and national policymakers about the relevance of policy alignment as well as the impact that a systematic OA policy landscape across Europe could have in terms of encouraging researchers’ compliance with OA policies. It is to a larger extent in the North West and Nordic regions that awareness about policy alignment is being raised due to the significant numbers of OA policies that already exist in many of these countries. As a result, some of the Key Nodes have been engaged not only in promoting the reinforcement of existing OA policies but also in promoting their alignment. In North West Europe, for example, not all institutional and funders OA policies produce the expect results (i.e. making research outputs openly available according to the OA policy stipulations) and often these policies make distinct and contradictory requirements which have implications for researchers that are subject to more than one OA policy. For this reason, but also as a result of the EC’s Recommendation issued in 2012, the reinforcement and alignment of OA policies is an important topic that has been discussed in the North West regional workshops and in the advocacy resources produced to national policymakers\textsuperscript{16}.

4. Sustaining the Knowledge Net beyond PASTEUR4OA

A core objective of the PASTEUR4OA project is to continue the Knowledge Net activities in supporting the development and alignment of OA policies across Europe after PASTEUR4OA ends in July 2016. Accordingly, the PASTEUR4OA consortium identified OpenAIRE as the organisation that will continue the Knowledge Net activities. OpenAIRE has been identified as the most suitable organisation to continue policy related activities not only because the aims of PASTEUR4OA and OpenAIRE are complementary but also because they both seek to strengthen the impact of the EC’s H2020 OA policy and to advance its agenda for Open Science.

\textsuperscript{13} Policy guidelines, http://goo.gl/mtg30i
\textsuperscript{14} Open Access Policy Alignment, http://goo.gl/YvOOz6
\textsuperscript{15} PASTEUR4OA Newsletter: Updates from Turkey, http://eepurl.com/bUU5qr
\textsuperscript{16} PASTEUR4OA Webinar: From OA Policy Development to Monitoring (in Portuguese), http://goo.gl/L6geVJ
More specifically, OpenAIRE ‘combines its substantial networking capacities and technical capabilities to deliver a robust infrastructure offering support for the Open Access policies in H020, via a range of pan-European outreach activities and a suite of services for key stakeholders’\textsuperscript{17}. Relatedly, PASTEUR4OA has engaged in advocacy activities across Europe following the recommendation that EU Member States should develop and implement aligned OA policies to ensure OA to all outputs from publicly-funded research\textsuperscript{18}.

\hspace{1cm} \underline{Promoting Open Access requires not only the existence of the necessary infrastructure, but also of strong, preferably aligned, policies at national, funder and institutional levels.}

Thus, the Knowledge Net activities will be embedded within OpenAIRE’s work plan and in particular as a part of the National Open Access Desks (NOADs’) activities. By including specific policy-focused activities in OpenAIRE’s programme, OpenAIRE will lead a Europe-wide OA strategy strongly based on three pillars: policy, advocacy and infrastructure. Some of the policy related activities that OpenAIRE NOADs will undertake will involve producing and disseminating policy-related advocacy resources, organising meetings and webinars for national policymakers, providing support on policy implementation, and informing national stakeholders about OA policy in OpenAIRE’s national workshops. More information about the next phase of activities of the Knowledge Net will be available in PASTEUR4OA website\textsuperscript{19}.

\textsuperscript{17} OpenAIRE2020 - Open Access Infrastructure for Research in Europe 2020, http://www.madgik.di.uoa.gr/content/1446
\textsuperscript{19} PASTEUR4OA, http://www.pasteur4oa.eu/