

The Knowledge Net

Final report on the Knowledge Net and its future

Deliverable 2.4

June 2016

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Enabling Open Scholarship



Deliverable



Grant Agreement number: 611742

Project acronym: PASTEUR40A

Project title: Open Access Policy Alignment Strategies for European Union Research

Funding Scheme: FP7 – CAPACITIES – Science in Society

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Deliverable No.	2.4
Deliverable Name	Report on progress of Network building and activities
Lead Beneficiary	EOS
Dissemination Level	PU
Expected Due Date	Month 29 (30/06/2016)
Actual submission date	Month 29 (21/06/2016)

D 2.4 – Report on progress of network building and activities

PASTEUR4OA is an FP7 project funded by the EUROPEAN COMMISSION

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Document Change Control

Version No	Date of Issue	Author(s)	Brief Description of Change
1.0	17/06/2016	Alma Swan	First version
1.1	21/06/2016	Alma Swan	Additional details added to final section

Abstract:

PASTEUR4OA (Open Access Policy Alignment Strategies for European Union Research) supports the European Commission's Recommendation to Member States of July 2012 that they develop and implement policies to ensure Open Access to all outputs from publicly-funded research.

PASTEUR4OA has helped develop and/or reinforce Open Access strategies and policies at the national level and facilitates their coordination among all Member States. It has built a network of centres of expertise in Member States that will develop a coordinated and collaborative programme of activities in support of policymaking at the national level under the direction of project partners.

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1. Executive summary

The PASTEUR4OA project had several aims, one of which was to establish, nurture and build a sustainable future for a network of expert organisations across Europe that could continue the project's OA (Open Access) policy work after the end of the funding period. This network is called the Knowledge Net.

The overall mission of the Knowledge Net has been to promote the development, adoption and implementation of Open Access policies that are aligned with the OA policy for Horizon 2020 by research funders and research institutions.

This report collates material from previous reports alongside data collected by the project on developments in each country of the Knowledge Net, and then describes the steps taken in recent months on creating a framework to ensure that the Knowledge Net work can continue in future under the umbrella of OpenAIRE.

Creating and building the Knowledge Net

In the early part of the project, candidate organisations were identified, considered and invited to join the Knowledge Net. An international meeting organised by the project at the end of 2014 brought together representatives from these organisations for the first time to get to know one another, discuss issues and work out how best to carry out the policy-related advocacy required by the project, and how to work together, supported by the project, to strengthen the network's structure and functioning.

Over the following 18 months the Knowledge Net members (called Key Nodes) were encouraged to engage in a direct and meaningful way with policymakers in their countries. As well as these research funder and research institution policymakers, the Key Nodes were also asked to make contact with, and keep informed, the National Point of Reference on Open Access in their country. During these activities the Key Nodes were supported by the project in terms of the provision of advice, guidance and advocacy materials and through updates on developments issued via the project's Regional Coordinator in their region.

To manage the Knowledge Net efficiently and to encourage the best possible working practices, the project divided Europe into five regions, each under the management of a local project partner. These Regional Coordinators were responsible for maintaining contact with and between the Key Nodes, for updating them on project developments and generally being the link between the Knowledge Net and the project. By working in regional groups, the project has enabled better, more tailored and more appropriate support to be offered to policymakers than would have been the case if a continent-wide basis were used, with all the inherent loss of detail and attention to specific needs of policymakers.

Achievements of the project working with and through the Knowledge Net

The members of the Knowledge Net (Key Nodes) were asked at their first meeting in December 2014 to indicate the main challenges they faced in promoting OA policy development and the main points were:

- OA appears to have low priority with research performing organisations and funders
- Maintaining and sustaining effective coordination at national and EU levels is problematic
- Member States' arrangements with publishers to secure deposit rights and short embargo periods are fragmentary and inconsistent
- Maintaining and sustaining effective coordination at national and EU levels has some difficulties

The Key Nodes, along with project partners, have worked for 18 months since the December 2014 meeting to engage with and inform and encourage policymakers to develop or adjust Open Access policies. Significant advances have been made in the following areas:

- **Facilitation of discussions on OA policymaking.** Discussions have been initiated with institutions, funders and governments in multiple European countries. These preliminary discussions have sought to raise policymakers' awareness about OA end to encourage them to develop OA policies and were promoted in meetings attended by PASTEUR4OA partners and/or Key Nodes and relevant stakeholders (government departments for education and science, national funders, academic institutions, national OA working groups, NPRs, and so on; in presentations delivered in OA-related events; at the PASTEUR4OA regional workshops; and through direct communications where advocacy materials, tailored information and advice were provided to policymakers. As a result of these activities, developments have taken place in countries new to OA as well as those better informed but where OA policy development is still low. 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 policymakers' awareness about OA and to encourage them to develop OA policies.
- **Providing support for 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.
- **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 and explaining the importance of aligning policies. 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.

Sustaining the Knowledge Net

Sustaining the Knowledge Net beyond the end of the project was a key objective for PASTEUR4OA. From the middle of 2015 a small group of project partners began the process of defining what the Knowledge Net's future options were and identifying how to achieve the best outcome.

The first decision made was that the Knowledge Net, though composed of member Key Nodes that were in the main willing and able to continue the policy-related work, needed to ally itself with or move under the umbrella of an existing organisation that could provide the financial resources necessary.

A number (7 in total) of potential candidate organisations were identified and research was carried out to establish how they are governed, what their strategies are and their own sustainability models. After due consideration, OpenAIRE was identified as the most suitable organisation to look after the Knowledge Net in future. The two projects share strategic and tactical aims and have a common structure that would make embedding the Knowledge Net into OpenAIRE a relatively simple logistical process, especially since around half of OpenAIRE's NOADs are also PASTEUR4OA Key Nodes and vice versa. Discussions have taken place between PASTEUR4OA and OpenAIRE and agreement has been reached on how to proceed with the process of embracing the Knowledge Net and its policy-related aims into OpenAIRE's operations. OpenAIRE will lead a European-wide Open Access strategy based on three pillars: policy, advocacy and infrastructure.

2. Introduction

The PASTEUR4OA project had several aims, one of which was to establish, nurture and build a sustainable future for a network of expert organisations across Europe that could continue the project's OA (Open Access) policy work after the end of the funding period. This network is called the Knowledge Net.

In the early part of the project, candidate organisations were identified, considered and invited to join the Knowledge Net. An international meeting organised by the project at the end of 2014 brought together representatives from these organisations for the first time to get to know one another, discuss issues and work out how best to carry out the policy-related advocacy required by the project, and how to work together, supported by the project, to strengthen the network's structure and functioning¹.

Over the following 18 months the Knowledge Net members (called Key Nodes) were encouraged to engage in a direct and meaningful way with policymakers in their countries. As well as these research funder and research institution policymakers, the Key Nodes were also asked to make contact with, and keep informed, the National Point of Reference on Open Access in their country. During these activities the Key Nodes were supported by the project in terms of the provision of advice, guidance and advocacy materials and through updates on developments issued via the project's Regional Coordinator in their region.

In the final nine months of the project, attention was directed towards finding a formula for sustaining the Knowledge Net after the end of the project. A small number of candidate organisations that could embrace the Knowledge Net were considered and, following talks between the project and OpenAIRE, plans are being made for OpenAIRE to continue the Knowledge Net's work after the end of the PASTEUR4OA project.

This report collates material from previous reports alongside data collected by the project on developments in each country of the Knowledge Net, and then describes the steps taken in recent months on creating a framework to ensure that the Knowledge Net work can continue in future under the umbrella of OpenAIRE.

1 Synthesis report of the Europe-wide project meeting of experts, 2/3 December 2014:
<http://www.pasteur4oa.eu/sites/pasteur4oa/files/deliverables/D2.2%20-%20Synthesis%20report%20of%20Europewide%20project%20meeting%20of%20experts.pdf>

3. Introduction to the Knowledge Net

The overall mission of the Knowledge Net has been to promote the development, adoption and implementation of Open Access policies that are aligned with the OA policy for Horizon 2020 by research funders and research institutions.

The Knowledge Net is composed of an expert organisation in each country that has the authority and expertise to engage with policymakers, provide them with information, share best practices and offer guidance and advice where appropriate. These Knowledge Net member organisations are called Key Nodes.

To manage the Knowledge Net efficiently and to encourage the best possible working practices, the project divided Europe into five regions, each under the management of a local project partner. These Regional Coordinators were responsible for maintaining contact with and between the Key Nodes, for updating them on project developments and generally being the link between the Knowledge Net and the project.

The regional structure was chosen because it reflects the perceptions of the project management about the distinctness of different areas of Europe in terms of awareness and activity on Open Access policy development. Indeed, these perceptions were confirmed at the first meeting of Key Nodes in London in December 2014, when one of the outstanding messages from the workshop was the extent of regional differences in OA policy terms. By working in regional groups, the project has enabled better, more tailored and more appropriate support to be offered to policymakers than would have been the case if a continent-wide basis were used, with all the inherent loss of detail and attention to specific needs of policymakers.

4. Creating and building the Knowledge Net

4.1 Aims of the Knowledge Net

The Knowledge Net was set up with a set of aims regarding OA policy-related activities, as follows:

- Coordinate activities that lead to OA policy development, implementation and reinforcement in its member states
- Promote cooperation between OA experts (Key Nodes)
- Share best practices and provide information and support on OA policy-making and on OA policy related issues to national policymakers
- Provide individually-tailored advice and support to national policymakers as it is acknowledged that European countries and organisations within those countries (governments, research institutions and research funders) are at different stages in terms of development and maturity of their OA policies and will therefore have distinct requirements
- Coordinate advocacy activities that promote to the development and reinforcement of effective and aligned OA policies

4.2 Identification of candidate organisations

The first piece of work carried out, early in the project, was to identify potential members of the Knowledge Net. One expert organisation was needed for each country and candidate organisations were those who were already known for working for open Access, such as OpenAIRE NOADs (National Open Access Desks), national advocacy organisations, library organisations and so on.

The aims and activities of the candidate organisations needed to match the aspirations of the project in terms of advocacy capability, focus on policy, and having or being able to construct a set of contacts and connections through which policy in that country could be influenced.

At the same time, Europe was (artificially) divided into five regions, simply to make managing the Knowledge Net as simple as possible, and five project partners were assigned the role of Regional Coordinator. The final line-up of these coordinators and the Knowledge Net member organisations, called Key Nodes, is shown in Table 1.

Region	Country	Key Node	Regional Coordinator (project partner)
North west	Ireland	Health Research Board Ireland	Enabling Open Scholarship (EOS)
	UK	Jisc	
	France	COUPERIN	
	Belgium	FNRS (National Research	
	Luxembourg	Foundation)	
	Netherlands	University of Luxembourg	
	Germany	Technical University of Delft	
	Austria	Helmholtz Association	
Nordic	Norway	FWF (Austrian Research Foundation)	CRISin
		University of Oslo	

	Sweden	National Library of Sweden	
	Finland	Lappeenranta University of	
	Iceland	Technology National University Hospital of Iceland	
Eastern	Croatia	Ruđer Bošković Institute	EIFL
	Czech Republic	VŠB-Technical University of Ostrava	
	Estonia	Estonian Research Council	
	Hungary	Hungarian Academy of Sciences	
	Latvia	University of Latvia	
	Lithuania	Lithuanian Research Council	
	Poland	Centrum Cyfrowe	
	Romania	Association AnelisPlus	
	Slovakia	Slovak Centre of Scientific and Technical Information	
	Slovenia	University of Ljubljana	
South east	Bulgaria	Bulgarian Academy of Sciences	EKT/NHRF
	Cyprus	University of Cyprus	
	Greece	EKT/NHRF	
	Serbia	University of Belgrade	
	Turkey	Hacettepe University	
	FYR Macedonia	Metamorphosis Foundation	
South west	Italy	Politecnico di Torino	University of Minho
	Malta	University of Malta	
	Portugal	University of Minho	
	Spain	FECYT	

Table 1: Knowledge Net member organisations (Key Nodes) and the regional structure created for ease of management

4.3 Early steps in Knowledge Net development

4.3.1 Guidance for Key Nodes

The project issued a guidance paper to Knowledge Net members in July 2014. This included:

- a description of the role of Key Node, including tasks that the Key Node was expected to undertake during the course of the project and how to develop a programme of activities to engage national policymakers and the National Point of Reference (NPR) on Open Access in their countries
- a suggested schedule for these tasks. This included the project timetable for specific policymaker engagement events throughout the project
- a standard letter to be used by the Key Nodes in contacting research-performing organisations and research funders in the quest to engage policymakers
- a list of relevant resources on Open Access policies (some in different languages)

In December 2014 a set of 7 national case studies, plus a non-technical picture of Open Access infrastructures across Europe, developed by the project was also supplied to Key Nodes with the aim of inspiring and guiding the Key Node organisations in developing and implementing Open Access policies in their countries. As the project proceeded thereafter an extensive set of advocacy materials was developed and published by the project for Key Node and public use.

4.3.2 Establishing the baseline for Open Access policy across Europe

The Key Nodes were surveyed at the beginning of their activity programme to find out what the current position was on Open Access policy in their countries. This was done so that the project had an initial picture of policy developments and would be able to assess what it had contributed by the end of the project period by building on this baseline situation. All the Key Nodes reported their national positions through a series of teleconferences with the Regional Coordinators and the responses collated by the WP2 leader, the University of Minho.

In addition to information gathered in this way through the project, there was an early opportunity to formally collect data on policy developments in each country at the meeting of Key Nodes in December 2014 (see footnote 1). The main challenges the Key Nodes considered they faced at this point in the project were:

- OA appears to have low priority with research performing organisations and funders
- Maintaining and sustaining effective coordination at national and EU levels is problematic
- Member States' arrangements with publishers to secure deposit rights and short embargo periods are fragmentary and inconsistent
- Maintaining and sustaining effective coordination at national and EU levels has some difficulties

The issue of challenges and what the Knowledge Net has achieved in respect of those challenges will be returned to later in this report (see section 5.1).

4.3.3 Regional coordination

Regional Coordinators for the five regions were appointed early in the project and engaged with Key Nodes through 2014 and during the Key Nodes meeting in December of that year. Early in 2015, guidance was issued from the project management group to regional coordinators on:

- what information was to be collected at intervals from Key Nodes
- what was to be reported back to the Work Package leader in terms of what Key Nodes were saying they (or their policymakers) needed in the form of advocacy materials (evidence, data, case studies, etc)
- their own roles in organising regional teleconferences, regional workshops, meetings with key policymakers and do forth

4.3.4 Regular updating on policy-related developments

The Regional Coordinators set up a programme of interaction with their regional Key Nodes. These meetings were almost always carried out through teleconferences at regular intervals. They enabled Coordinators to collect data on new developments in each country, including what had transpired directly as a result of project activity through either project partners or Key Nodes.

The results of these discussions were reported back to the WP leader. This (a) ensured that the project partners could be regularly informed by the project management of developments taking place across the whole of Europe and (b) enabled data to be collected to create a moving picture of policy developments and inform further work on and through the Knowledge Net.

4.3.5 The first meeting of the Knowledge Net

Representatives of all Key Nodes were brought together for the first time in London in December 2014 for a workshop. The meeting informed participants about OA policy formulation and design, policy compliance and alignment, and the European picture on OA policy. It was also a means to establish supportive and constructive relationships between multiple stakeholders as members of the Knowledge Net, and for these national experts to identify and map the challenges that act as barriers to the advance of OA. The main challenges identified were:

- Low levels of awareness about OA by policymakers
- OA is a low priority
- Low awareness about how to develop an OA policy
- Lack of information on how to monitor policy compliance
- A complex and diverse OA policy landscape with policies expressing multiple distinct requirements

The Key Nodes discussed these issues extensively and came up with some potential solutions along with suggestions for what the project could do to help achieve those solutions. Further detail on this is reported in section 5.1.

5. Achievements of the project working with and through the Knowledge Net

5.1 The Knowledge Net analysis of challenges for OA policy development and some potential solutions

As mentioned in section 4.2.2 above, the Key Nodes were asked at their first meeting in December 2014 to indicate the main challenges they faced in promoting OA policy development and the main points were:

- OA appears to have low priority with research performing organisations and funders
- Maintaining and sustaining effective coordination at national and EU levels is problematic
- Member States' arrangements with publishers to secure deposit rights and short embargo periods are fragmentary and inconsistent
- Maintaining and sustaining effective coordination at national and EU levels has some difficulties

In small group discussion, ordered by region, they discussed these points further. It is worth reporting here in detail what transpired, because the outcome set the scene for Knowledge Net work over the rest of the project. Table 2 lists the most important challenges, possible concrete solutions to address those challenges, and identifies some of the outputs and activities that could be developed to address them.

In some cases members of a regional group indicated that they were facing a particular challenge and other members of the same group were able to demonstrate what worked well in their countries and gave recommendations on how to address the specific issues. In other words, there were lessons that some PASTEUR4OA partners and Key Nodes could share with others to result in specific solutions and outputs to address specific challenges.

Challenges	Solutions	Outputs/Activities for PASTEUR4OA
Policy: Developing OA policies is difficult (South West Europe group discussion)		
Developing policies is difficult because there still is a lack of expertise at the top and bottom levels and because there is a lack of human resources.	<ul style="list-style-type: none"> • Developing a toolkit that explains how OA policy can be developed. It could be a toolkit similar to the one developed during the MedOANet project and which was used by the Portuguese national research funder to develop its OA policy • Raising policymakers, funders and librarians awareness about OA policies and providing them with training and resources on OA 	<ul style="list-style-type: none"> • OA policy toolkit and guidelines • Provide training and training materials to policymakers, funders and librarians on OA policy and policy related issues • Relevant policymakers attend regional workshops

<p>OA policy does not make reference to the embargo period limit and is not linked to the research evaluation process.</p>	<ul style="list-style-type: none"> • Advocating for policy to include an embargo period limit and to link open access to the research evaluation process. The results from the OA policy analysis work being conducted in the PASTEUR4OA project will contribute with more information on these issues • Providing information about the University of Liege model may lead to the inclusion of open access to scientific information as a research evaluation condition 	<ul style="list-style-type: none"> • OA policy toolkit and guidelines address essential policy formulation issues such as embargo periods and the relation between OA and research assessment • Make resources related to OA policies, embargo periods and research evaluation available to policymakers • Write case study on University of Liege OA policy and on the process of relating OA with research evaluation Raise policymakers' awareness about how OA policies should be formulated in the PASTEUR4OA regional workshops with funders and institutions
<p>Issues that need to be addressed regarding the OA policies implementation and monitoring processes.</p>	<ul style="list-style-type: none"> • Providing information on OA policy implementation and monitoring processes 	<ul style="list-style-type: none"> • Case study on best practices for policy implementation and monitoring processes: give examples of monitoring mechanisms that are successfully being used by funders and institutions in other countries and explain how they can be replicated in other cases
<p>Challenges</p>	<p>Solutions</p>	<p>Outputs/Activities for PASTEUR4OA</p>
<p>Coordination: OA has low priority with research performing organisations and funders, so affects current research systems: (North West Europe group discussion)</p>		
<p>Is slowing down research and innovation</p>	<ul style="list-style-type: none"> • Involving research performing organisations and industries in the process of transition to OA • Demonstrating the benefits of OA to academic-industry partnerships, to advance technological innovation and to facilitate knowledge transfer Providing evidence that lack of OA to scientific information harms innovation, especially for small and medium-sized enterprises (SMEs) 	<ul style="list-style-type: none"> • Case study on the impact that OA has to the private sector, to academic-industry partnerships and to advance economic growth. Give examples of cases where more advances could have been made if OA to scientific information was available
<p>Is time consuming and expensive. It is difficult to find and get access to crucial information</p>	<ul style="list-style-type: none"> • Demonstrating the time saving and cost saving advantages that OA facilitates to policymakers, funders and librarians 	<ul style="list-style-type: none"> • Factsheet with comprehensive benefits of open access. Factsheet translated to different languages
<p>Is extremely harmful for research and researchers and reduces the</p>	<ul style="list-style-type: none"> • Demonstrating the consequences of disregarding the transition to OA 	<ul style="list-style-type: none"> • Guidelines and factsheet detail the benefits of OA. Factsheet includes

possibility for problems to be solved in other parts of the world		information on negative effects of OA not being promoted
Is depriving research funders and research managers from doing a good job because they are not getting the most out of the knowledge produced. This leads to lost opportunities for universities, research funders and the society in general	<ul style="list-style-type: none"> Demonstrating how the knowledge produced in scientific publications can be better used if made available on OA and how OA is an advantage to academic libraries and universities 	<ul style="list-style-type: none"> Factsheet with comprehensive benefits of open access OA case study focused on successful cases where OA policies have been adopted by funders and institutions Case study demonstrates what information and metrics are being collected. Case study highlights the advantages that the transition to OA brought
Lacks evidence on OA metrics	<ul style="list-style-type: none"> Providing information and metrics about the positive effects of visibility – webanalytics, repository indicators 	<ul style="list-style-type: none"> Case study and/or factsheet with information about indicators that provide evidence of positive impacts of OA. Concrete examples of cases where metrics are being used and on the kind of information that they provide is included in the case study/factsheet (e.g. University of Liege)
Lacks evidence on OA citations	<ul style="list-style-type: none"> Demonstrating that increased citations resultant from open access to academic publications are advantageous for researchers and have a positive impact on the university 	<ul style="list-style-type: none"> [same as above]
Lack of information on economic models	<ul style="list-style-type: none"> Disseminating information about OA economic models as demonstrated in the various Houghton/Swan reports 	<ul style="list-style-type: none"> Factsheet with clear and comprehensive information on OA economic models and with a list of recommended readings
Challenges	Solutions	Outputs/Activities for PASTEUR4OA
Coordination: OA has low priority with research performing organisations and funders (East Europe group discussion)		
<ul style="list-style-type: none"> Lack of financial resources: 		
The total amount of research funding available is low.	<ul style="list-style-type: none"> Considering ways in which OA can be promoted based on (non-)existing funds 	<ul style="list-style-type: none"> Promoting dialogue with policymakers
Grants are too small to cover for APCs (Gold OA).	<ul style="list-style-type: none"> Raising awareness about Green OA as an alternative to publishing in OA journals 	<ul style="list-style-type: none"> OA guidelines and factsheet
Some European universities are poor. Often they are small universities and have lower weight when compared with internationally renowned universities. These universities will	<ul style="list-style-type: none"> Demonstrating that coordination at the European level is very important for small countries to promote effective policy development and implementation 	<ul style="list-style-type: none"> Explaining the importance of promoting coordinated activities in Europe in written resources and at the regional workshops

not succeed in advancing OA on their own.		
<ul style="list-style-type: none"> Sustainability: 		
Sustainability is an issue. Higher overheads for projects are needed, especially for projects that deal with research data.	<ul style="list-style-type: none"> Considering ways in which OA can be promoted according to existing funds Demonstrating the benefits of promoting and funding the transition to OA 	<ul style="list-style-type: none"> OA guidelines and factsheet demonstrate the benefits and long-term savings resultant from the promotion of OA to scientific information and research data
<ul style="list-style-type: none"> Awareness raising: 		
∇ Lack of recognition about the real benefits of OA.	<ul style="list-style-type: none"> Disseminating information about OA to researchers, funders and policymakers 	<ul style="list-style-type: none"> Dissemination of OA case studies, guidelines and factsheet to researchers, funders and policymakers Empowering key stakeholders (institutions and funders) to promote information and training sessions targeted to researchers
<ul style="list-style-type: none"> Policymaker engagement and promoting compliance: 		
In some countries H2020 recommendations were adopted but nothing is done concretely. In other countries, national policies have not been adopted yet but it is expected that when they are they will not produce the expected outcomes.	<ul style="list-style-type: none"> Initiating a wider dialogue between policymakers, stakeholders and the scientific community about H2020 OA policy Supporting stakeholders (funders and institutions) to develop a clear strategy to promote effective OA policy implementation Engaging in dialogue with policymakers to promote the definition of competencies, tasks and responsibilities to develop and implement OA policies Promoting advocacy activities where the H2020 OA policy is explained to national policymakers and where policy development and/or effective policy implementation is encouraged. 	<ul style="list-style-type: none"> Setting meetings with policymakers. Dissemination of OA resources to policymakers Regional workshops with policymakers
Repositories are in place but there is no support from policymakers.	<ul style="list-style-type: none"> Supporting policymakers to develop a clear strategy on how repositories must be used Raising researchers, librarians and the wider academic community awareness about the existence and purpose of repositories 	<ul style="list-style-type: none"> Meetings with policymakers and academic communities to discuss best uses for repositories and ways to raise awareness about repositories Providing resources for librarians to hold information and training sessions with researchers on OA policies and online repositories
<ul style="list-style-type: none"> Policy: 		
Lack of OA policies at the national level.	<ul style="list-style-type: none"> Providing information to policymakers on how to develop OA policies Supporting policymakers in developing a clear strategy to 	<ul style="list-style-type: none"> Meetings with policymakers. Dissemination of relevant OA resources (guidelines, case studies, etc.)

	<ul style="list-style-type: none"> develop, implement and monitor OA policies 	<ul style="list-style-type: none"> Relevant policymakers attend regional workshops
	<ul style="list-style-type: none"> Using H2020 OA policy is as a model and a tool to facilitate the development of national OA policies 	
<ul style="list-style-type: none"> Cultural change: 		
<p>Researchers have been educated to publish in the same way for ages. OA is very recent. Researchers do not like to be told what to do. They do not know what OA is.</p>	<ul style="list-style-type: none"> Increasing researchers' awareness about OA and demonstrating the advantages for researchers to make their scientific publications available on OA 	<ul style="list-style-type: none"> OA case studies, guidelines and factsheets disseminated to researchers. Empower stakeholders (institutions and funders) to promote information and training sessions target to researchers
<ul style="list-style-type: none"> Publishing: 		
<p>Journals do not care about budgets. Saving money is not an issue. Consortia subscriptions do not really save money. There are good examples of repositories and policies but never a convincing case. Publishers do not see it as a rational solution.</p>	<ul style="list-style-type: none"> Advocating for OA publications to become visible Raising awareness about OA and successful OA publishing models 	<ul style="list-style-type: none"> Roundtable with local publishers to raise awareness about OA
<p>Research evaluation in some countries is very quantitatively oriented. WoS and Thomson Reuters are not seen as being compatible with OA.</p>	<ul style="list-style-type: none"> Providing comprehensive information about OA Raising awareness about OA initiatives such as Thomson Reuters Open Access Journals List (http://science.thomsonreuters.com/cgi-bin/linksj/opensearch.cgi) 	<ul style="list-style-type: none"> OA case study and information sessions that address issues related to OA publishing and 'traditional' publishing
<ul style="list-style-type: none"> Green/Gold OA: 		
<p>Research quality is an issue. Good research is published in foreign journals. Green OA means that valuable research gets deposited locally, even if Gold OA journals are of low quality. Why would institutions support Gold OA?</p>	<ul style="list-style-type: none"> Providing comprehensive information on the Green and Gold OA routes 	<ul style="list-style-type: none"> OA guidelines, factsheet, case studies, reports
<ul style="list-style-type: none"> Current Research Information Systems: 		
<p>OA has low priority in institutions.</p>	<ul style="list-style-type: none"> CRIS system may be the way forward 	<ul style="list-style-type: none"> Case studies, reports on effective CRIS systems
<ul style="list-style-type: none"> Research Assessment: 		
<p>No mention of OA in career progression and research evaluation system can hinder OA.</p>	<ul style="list-style-type: none"> Supporting a change in the research assessment procedures Providing information to the academic community on the advantages that OA will bring 	<ul style="list-style-type: none"> OA policy toolkit and guidelines address essential policy formulation. For instance: providing concrete examples where OA was included in research assessment procedures; explaining the mechanisms that were been put in place to monitor compliance with this requirement; demonstrating the impact that this procedure has had
Challenges	Solutions	

		Outputs/Activities for PASTEUR4OA
<p>Coordination: OA has low priority with research performing organisations and funders (South East Europe group discussion)</p>		
<p>The benefits of open access for the research community are still not clear</p>	<ul style="list-style-type: none"> Using the Horizon 2020 OA policy as a tool to push OA forward by extending the related provisions to all publications, irrespective of their source of funding (i.e. European or national) 	<ul style="list-style-type: none"> OA guidelines, case studies, reports, factsheets
<p>Difficulties in understanding more complex issues such as licencing</p>	<ul style="list-style-type: none"> Raising awareness about licencing and copyrights 	<ul style="list-style-type: none"> OA guidelines, case studies, reports, factsheets include information on licencing and copyrights
<p>Low levels of awareness among researchers</p>	<ul style="list-style-type: none"> Increasing researchers' awareness about OA and demonstrating the advantages for researchers to make their scientific publications available on OA 	<ul style="list-style-type: none"> OA case studies, guidelines and factsheets disseminated to researchers Empower stakeholders (institutions and funders) to promote information and training sessions targeted to researchers
<p>Repositories are not sufficient to guarantee the adoption of OA policies at a higher level</p>	<ul style="list-style-type: none"> Raising policymakers, researchers, librarians and the wider academic community awareness about OA and repositories 	<ul style="list-style-type: none"> Meetings with policymakers and academic communities to discuss the importance of OA to scientific information Dissemination of OA guidelines, case studies, reports, factsheets to key stakeholders Relevant policymakers attend regional workshops
<p>In some countries, changes in political posts have led to an absence in policy continuity. On many occasions OA advocates have to re-start their work</p>	<ul style="list-style-type: none"> Having determined checks in place to ensure a systematic engagement with policymakers and to ensure that relevant OA updates are transmitted 	<ul style="list-style-type: none"> Meetings with policymakers to inform them about OA and to update them on the latest developments at the national and EU levels Dissemination of relevant OA information: guidelines, case studies, reports or factsheets
<p>Some countries are latecomers to OA</p>	<ul style="list-style-type: none"> Lesson-drawing: countries that are latecomers in relation to OA policies implementation can learn both from other countries success stories and failures 	<ul style="list-style-type: none"> Dissemination of resources such as case studies, reports, factsheets to relevant stakeholders
<p>Low involvement of stakeholders</p>	<ul style="list-style-type: none"> Promoting wider dialogue and engagement with a broader range of stakeholders in the processes of developing and implementing OA policies 	<ul style="list-style-type: none"> Meetings with stakeholders. Dissemination of resources such as case studies, reports, factsheets to relevant stakeholders Relevant stakeholders attend regional workshops

Challenges	Solutions	Outputs/Activities for PASTEUR4OA
Infrastructure: Current infrastructure constrains effective OA (South West Europe group discussion)		
Issues around the economic sustainability of infrastructures. A national support institution does not exist. The technical side is managed by each institution and there is a lack of investment in this area	<ul style="list-style-type: none"> Lesson learning: in countries such as Spain and Portugal there are national infrastructures that collect information from various sources. Looking at what lessons can be learned from these and other cases can be important for countries where such integrated infrastructures do not exist yet 	<ul style="list-style-type: none"> Case study on how to develop a national support infrastructure, how to manage it, what resources are required, and examples of best practices
Challenges	Solutions	Outputs/Activities for PASTEUR4OA
Publishers: MS arrangements with publishers to secure deposit rights and short term embargoes are fragmentary and inconsistent (Nordic region group discussion)		
MS arrangements with publishers to secure deposit rights and short term embargoes are fragmentary and inconsistent	<ul style="list-style-type: none"> Replicating the University of Liege model (incl. top-down approach, strong leadership, basis for evaluation) Licensing negotiations must include self-archiving as part of licensing agreements and top level involvement in negotiations Strong funder mandates must require immediate deposit and short embargo periods Open access must be adopted as a criterion for new funding applications 	<ul style="list-style-type: none"> Provide facts and scientifically good statistics and indicators. Collect success stories Give feedback to funders and government that their mandates work. Provide feedback to researchers on increased visibility
Challenges	Solutions	Outputs/Activities for PASTEUR4OA
Publishers: MS arrangements with publishers to secure deposit rights and short term embargoes are fragmentary and inconsistent (East Europe group discussion)		

Burden on the researcher:		
<p>Researchers should have the choice but what if publishers do not agree with the embargo period? If articles are accepted and published, researchers are happy and they will not think about negotiations with publishers</p>	<ul style="list-style-type: none"> Educating researchers and informing them of the advantages of OA 	<ul style="list-style-type: none"> OA case studies, reports, factsheets. • Case studies, guidelines and factsheets informing researchers about OA in general and publishing agreements conditions Empower stakeholders (institutions and funders) to promote information and training sessions targeted to researchers
<ul style="list-style-type: none"> Checkbox: 		
<p>It would help to have a checkbox in the publishers' agreement. Having something similar to what happens to US researchers: they cannot transfer copyright and only need to tick a box in the agreement</p>	<ul style="list-style-type: none"> Advocating for the inclusion of a copyright checkbox in publishers agreements Raising awareness about publishers' policies 	<ul style="list-style-type: none"> OA case study and factsheet make reference to the advantages of publishers' agreements having a copyright checkbox
Challenges	Solutions	Outputs/Activities for PASTEUR4OA
<p>Publishers: MS arrangements with publishers to secure deposit rights and short term embargoes are fragmentary and inconsistent (South West Europe group discussion)</p>		
<p>Issues related to embargo periods.</p>	<ul style="list-style-type: none"> Guidelines about the position on embargo periods is helpful and all the negotiations between institutions and publishers should be based on a common approach A European guideline on embargo periods should exist in order to make it easier to comply with the H2020 OA policy In countries like Portugal, Spain and Malta a unique institution is responsible to negotiate with publishers. In these cases, harmonisation of embargo periods can be more easily negotiated with publishers 	<ul style="list-style-type: none"> OA policy toolkit and guidelines address essential policy formulation elements such as embargo periods. Emphasis is given to the importance of having embargo periods that are in agreement with those of the H2020 OA policy

Table 2: Challenges raised by Key Nodes (column 1), the possible solutions to those challenges suggested by other Key Nodes (column 2), and what the project could develop to help reach the solution (column 3)

5.2 Achievements of the project, working with the Knowledge Net

The Key Nodes of the Knowledge Net, along with project partners, have worked for 18 months since the December 2014 meeting to engage with and inform and encourage policymakers to develop or adjust Open Access policies. Significant advances have been made in the following areas:

- Facilitation of discussions on OA policymaking

- Providing support for the development of effective OA policies
 - Contributing to the revision, reinforcement and/or alignment of OA policies
-

5.2.1 Facilitation of preliminary discussions on OA policymaking

Discussions have been initiated with institutions, funders and governments in multiple European countries. These preliminary discussions have sought to raise policymakers' awareness about OA end to encourage them to develop OA policies and were promoted in meetings attended by PASTEUR4OA partners and/or Key Nodes and relevant stakeholders (government departments for education and science, national funders, academic institutions, national OA working groups, NPRs, and so on; in presentations delivered in OA-related events; at the PASTEUR4OA regional workshops; and through direct communications where advocacy materials, tailored information and advice were provided to policymakers.

As a result of these activities, developments have taken place in countries new to OA as well as those better informed but where OA policy development is still low. 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 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 and 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 funder and institutional OA policies. For instance, the PASTEUR4OA regional workshops in East and South East Europe have been attended by 72 and 50 participants respectively, representing presidents, vice-rectors and researchers 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 institutional or funders levels. This results from the fact that awareness about OA is still not widespread and that more OA policies are still needed. As an illustration, 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 were therefore 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.

5.2.2 Providing support for the development of effective OA policies

On the second key area, ***providing support for 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 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.

5.2.3 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 and explaining the importance of aligning policies. 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. 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 expected 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.

5.2.4 Summary of concrete advances in OA policy-related activity facilitated or stimulated by the PASTEUR4OA project

The following table shows the main advances directly facilitated or stimulated by the PASTEUR4OA project and is presented to give a bird's eye view of where there have been concrete outcomes from the intensive project activity.

Country	Action
North West Europe	
Ireland	Used resources developed by PASTEUR4OA and distributed to the national OA committee Jump started one research funder to examine OA policy monitoring in the hopes of being a national pilot
UK	Resources developed by PASTEUR4OA used extensively KN has been raising UK institutions awareness about the Horizon 2020 Open Access policy KN has been promoting PASTEUR findings and materials at many OA events and in policy-related meetings KN has written articles for journals and press KN promoted and disseminated PASTEUR4OA resources RCUK policy: UK Key Node provided advice and practical/technical help HEFCE policy: EOS advisers helped HEFCE firm up policy details. UK Key Node provided advice and support to policy officers
France	KN successfully lobbied parliament to include OA in a new digital law Translation of PASTEUR4OA resources Dissemination of PASTEUR4OA resources to policymakers
Belgium	FNRS OA policy updated as a result of regional workshop Drafting an OA decree at the Cabinet of Minister Marcourt Project gave advice to BELSPO on draft OA (now adopted)
Netherlands	The overview of what happens in the other member states was useful in the planning of the Open Science conference Disseminated PASTEUR4OA resources in national OA working group
Luxembourg	Project gave advice on draft national OA policy
Germany	KN has used resources developed by PASTEUR4OA, disseminated to all stakeholders KN has been liaising with German Rectors' Association KN invited to speak about the project at a meeting of German committee of university research libraries (Hochschulausschuss für wissenschaftliche Bibliotheken) Awareness of the project has encouraged consideration of the idea of policy alignment Helmholtz Association (Germany's biggest research organisation) has a new OA policy: PASTEUR helped in the decision-making process by providing support that policies should be aligned
Austria	Advocacy materials disseminated by Austrian research institutions FWF case study used specifically and promoted through the OANA

Nordic region	
Denmark	<p>Danish National Open Access strategy</p> <p>Open Access Indicator</p> <p>National Open Access network, and local Open Access expertise</p> <p>OA working group</p>
Sweden	<p>Proposal for National Guidelines for Open Access to Scientific Information</p> <p>National OA-policy?</p>
Norway	<p>National OA working group</p> <p>National OA guidelines: KN is secretary to the working group established by the Ministry and has contributed PASTEUR materials</p> <p>National OA-policy</p>
Finland	<p>Pasteur4OA principles and targets have been presented and discussed monthly in Open Science seminars in Finnish universities and in working groups of the Open Science and Research Initiative</p> <p>PASTEUR4OA advocacy material and policy papers used in discussions at the ministry</p> <p>OA working group</p>
Iceland	<p>Establishing a national repository</p> <p>Establishing a more formal OA group or network</p>
Eastern region	
Croatia	<p>Ruđer Bošković Institute OA mandate influenced by project</p> <p>New recommendations from Rectors Council probably influenced by project documents</p> <p>Ministry of Science, Education and Sports leads a national OA policy working group, drafting the national OA policy</p> <p>FOSTER co-funded events</p>
Czech Republic	<p>National OA policy working group drafted the national OA policy document with assistance from project</p> <p>Translated PASTEUR4OA institutional OA policy template</p> <p>VŠB-Technical University of Ostrava OA policy recommendations: project guidelines used as basis and adapted</p> <p>Brno University of Technology and Czech Academy of Sciences made a public commitment to refine their OA policies</p> <p>FOSTER co-funded events: project material used and speaker provided</p>
Estonia	<p>Estonia Research Council public open science consultations: project had some influence here</p> <p>Project materials very helpful</p> <p>FOSTER co-funded events: two speakers from project</p> <p>PASTEUR regional meeting influential</p>
Hungary	<p>National OA policy working group</p> <p>Setting up University of Debrecen OA publishing fund</p> <p>Promoted aligned OA policies in universities and NKFIH</p> <p>Debrecen University adopted its OA policy, University of Szeged is drafting one</p> <p>The project provided good practice examples on OA publishing policies</p> <p>MTA consulted universities on their OA policy developments</p> <p>Developed Pasteur4OA resources</p> <ul style="list-style-type: none"> - National OA policy working group - Promoted aligned OA policies in universities and NKFIH; MTA consulted universities on their OA policy developments - Provided good practice examples on OA publishing policies - Developed PASTEUR4OA resources - The Hungarian language webpage of PASTEUR - PASTEUR4OA advocacy materials translated to Hungarian

	- Hosting PASTEUR4OA regional workshops for research funders and research performing organizations
Latvia	<p>OA policy working group</p> <p>University of Latvia institutional OA policy draft</p> <p>National discussion "Access to research data from publicly funded research in Latvia"</p> <p>FOSTER co-funded events</p>
Lithuania	<p>The Research Council of Lithuania (RCL) adopted the Guidelines for OA to Research Results</p> <p>Informal OA policy working group was started in the country</p> <p>The RCL started to maintain a website page on OA</p> <p>OA discussions were maintained including discussions on the Open research data</p> <p>FOSTER co-funded events: two speakers from Pasteur4OA</p> <p>Developed Pasteur4OA resources</p> <p>Kaunas University of Technology and Vilnius University used Pasteur4OA resources to work on their OA policy drafts</p> <p>Pasteur4OA resources were used while:</p> <ul style="list-style-type: none"> - Mykolas Romeris University has been revising its OA policy - Vilnius Gediminas Technical University adopted OA policy
Poland	<p>The Ministry of Science and Education released OA policy recommendations, drafting a national open research data policy: check later</p> <p>OA working group</p> <p>Institutes of Polish Academy of Sciences drafted their Open Science policies</p> <p>National Science Centre included mandatory OA into one of its funding programmes</p> <p>FOSTER co-funded events: train the trainers programme</p>
Romania	<p>OA is a part of the Open Government Partnership Initiative</p> <p>Informal WG on open science drafting a Romanian open science strategy with main support from the Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI, Key Node) and The Ministry of Education and Scientific Research; using PASTEUR4OA resources and information</p>
Slovakia	<p>National OA working group</p> <p>Evaluated implementation of the national OA Action Plan 2015</p> <p>Drafted a New Action Plan for 2016-2019</p> <p>National OA policy adopted through the Open Government Partnership Initiative</p> <p>Advocacy materials used effectively</p>
Slovenia	<p>National OA working group used project resources to draft policy</p> <p>Project has provided input in consultation on national strategy</p> <p>Resources regularly sent to institutions</p> <p>National strategy of OA to scientific publications and research in Slovenia 2015-2020</p> <p>Action plan to implement a national OA strategy</p> <p>FOSTER co-funded event: one speaker</p>
South east region	
Bulgaria	<p>Materials from PASTEUR4OA project was presented to the Ministry of Education and Science and Bulgarian National Fund</p>
Cyprus	<p>National Open Access policy for Cyprus: project informed process and policy template used (2 visits)</p> <p>Used advocacy material from PASTEUR4OA</p> <p>OA policy working group: project participated in discussions</p> <p>Provided feedback in consultation process</p>
Greece	<p>Discussions with General Secretariat of Research and Technology</p> <p>Workshop at the University of the Aegean</p> <p>The Technical University of Crete and the International Hellenic University adopted OA policies</p> <p>OA policy of the International Hellenic University (IHU)</p> <p>EKT prepared a policy template for NHRF</p> <p>Presented at Rectors Conference and emailed</p> <p>Regional workshop included vice rectors</p>
Serbia	<p>Erasmus project BE-OPEN - Boosting Capacities for Open Access to Research at Serbian universities</p> <p>Policy proposal has been prepared by the National Documentation Centre and SPARC Europe</p>

	<p>Working group for OA has been formalised by project</p> <p>Used advocacy material from PASTEUR4OA</p> <p>Special clause in national call result of PASTEUR activity</p>
Turkey	<p>Translation of advocacy materials</p> <p>Prepared a guide on how to register the policies on ROARMAP</p> <p>4th National Open Access Workshop in 2015 and other workshops</p> <p>Established an open science committee: established by TUBITAK</p> <p>Hacettepe has prepared a draft Open Access policy based on PASTEUR work</p> <p>Help is being given to TUBITAK to draft a policy</p>
FYR Macedonia	<p>Advocating for open educational resources (OER)</p>
South west region	
Portugal	<p>Prepared a wiki for the Italian Association on Open Science</p> <p>Liaised with National Research Council (CNR) on OA policy</p> <p>Developed a tool to help institutions check their policy against H2020 criteria</p> <p>Engagement with national policymakers</p> <p>Promoted the reinforcement and effectiveness of OA policies</p> <p>Developed, disseminated and used PASTEUR4OA resources</p>
Spain	<p>Liaising with local academics and researchers</p> <p>University of Malta OA Policy</p> <p>Advised MCST on how to improve Open Access</p> <p>FOSTER co-funded event</p> <p>Distribution of advocacy resources</p> <p>Use of policy template</p>
Malta	<p>Maintaining regular contacts with the Secretary of State of Science and Technology as Open Science</p> <p>The Ministry of Science has established an Advisory Work Group for the National Open Science Policy, with the participation of the Key Node</p> <p>Translation of PASTEUR4OA resources into Portuguese</p> <p>Organised a webinar targeted to repository managers and institutional representatives</p> <p>Annual meetings of the Portuguese Task Force</p> <p>Developed, disseminated and used PASTEUR4OA resources</p> <p>National public funder OA policy</p>
Italy	<p>FECYT hosted a full-day workshop for Research Funders of the SW Region: PASTEUR involvement</p>

Table 3: Policy-related developments catalysed or helped by PASTEUR4OA

6. Sustaining the Knowledge Net beyond the PASTEUR4OA project

Sustaining the Knowledge Net beyond the end of the project was a key objective for PASTEUR4OA. From the middle of 2015 a small group of project partners began the process of defining what the Knowledge Net's future options were and identifying how to achieve the best outcome.

6.1 Scenarios for the future of the Knowledge Net

The first decision made was that the Knowledge Net, though composed of member Key Nodes that were in the main willing and able to continue the policy-related work, needed to ally itself with or move under the umbrella of an existing organisation that could provide the financial resources necessary. The Key Nodes alone could not commit to making financial contributions that would be enough to sustain the work.

The options for the Knowledge Net's future were really twofold: the Knowledge Net could be attached to another organisation (Scenario 1), or it could be part of a collaboration between several organisations similar to the model used by the Knowledge Exchange, a coalition of 5 organisations with shared goals regarding scholarly communication (Scenario 2).

The eventual scenario would be determined by the possible organisations that would and could partner with the Knowledge Net.

6.2 Screening candidate organisations

A number (7 in total) of potential candidate organisations were identified and research was carried out to establish the following information for each of them:

- Reach – the geographical and other characteristics of the target audience for each organisation. The Knowledge Net has and will continue to have a Europe-wide focus and any organisation that it allied with must have a very similar reach
- Governance – the formal structure of each organisation and the way it is governed and regulated
- Members and the robustness of the membership model for each organisation. The exercise also looked at the degree of overlap between each organisation's membership and the PASTEUR4OA Key Nodes and whether this was likely to be an advantage or a disadvantage
- Strategy – what the long term aims and objectives of each organisation are, and whether these are a good fit with the aims of the Knowledge Net's policy-focused work. There are a number of organisations that look to be possibilities but their strategic goals are divergent to those of the Knowledge Net
- Sustainability – what the business model of each organisation is and how strong the financial base is; what activities and aims of each organisation make it likely that it will be needed and valued into the medium term
- Strengths and weaknesses in the overall concept of allying the Knowledge Net with each candidate organisation – where are the complementarities and how valuable are they, and where are the potential problems and how significant would they be?

6.3 Selection of OpenAIRE as the preferred organisation

After due consideration, OpenAIRE was identified as the most suitable organisation to look after the Knowledge Net in future. There are significant complementarities between the two organisations and preliminary discussions between them indicated agreement to further explore the issues.

6.3.1 Complementarity of PASTEUR4OA and OpenAIRE

The two organisations complement one another in the following ways:

- (i) **Shared strategic aims:** both the Knowledge Net and OpenAIRE seek to strengthen the impact of the H2020 Open Access policy and advancing the open science agenda

- (ii) **Shared tactical aims:** OpenAIRE and the Knowledge Net share the tactical aims of encouraging more policies on OA, and making policies as effective as possible. OpenAIRE focuses on engaging, training and supporting the research community on the way in which infrastructure allows the fulfilment of the Horizon 2020 Open Access mandate, while PASTEUR4OA's work is based on the same type of activities with a focus on a specific stakeholder group – policymakers – and on a specific issue – policy development and/or reinforcement. By including specific policy-oriented activities in OpenAIRE's programme, OpenAIRE would be enhancing and leveraging its vital work in advancing a Europe wide open access infrastructure. OpenAIRE would, therefore, lead a European-wide Open Access strategy based on three pillars: policy, advocacy and infrastructure. There are significant overlaps in the work of the two organisations, as shown below:

OPENAIRE NOADS	PASTEUR4OA KEY NODES
Engagement	
Communication and briefing of National Points of Reference (NPRs)	Identifying national policymakers
	Creating or taking advantage of national Open Access working groups
Engagement with researchers, project managers, etc.	Engagement with policymakers Development of engagement programmes at national level
Training and Support	
Dissemination of materials raising awareness on OA in general and OA policy developments and the services offered by OpenAIRE	Support through the production of advocacy materials tailored to the needs of policy makers and on the basis of their feedback
H2020 training and support to a wide range of stakeholders	Training and support on developing OA policies through the Europe-wide meeting of experts, regional workshop, the Final Conference and events organised at national level
Dissemination Activities	
Organisation of outreach activities focusing on the uptake of OA mandate in the country, discussing national policy and infrastructure interoperability and involving different stakeholders	Disseminating advocacy resources to policymakers
Developing a communication network with key stakeholders	

Table 4: Complementarities in activities between OpenAIRE and PASTEUR4OA

(iii) **Common structure:** OpenAIRE has a networked structure like the Knowledge Net: OpenAIRE has NOADs (National Open Access Desks) set within expert organisations in each country across Europe and the PASTEUR4OA Knowledge Net has its Key Nodes. Moreover, there is considerable overlap between OpenAIRE NOADs and Knowledge Net Key Nodes. Of the 33 Key Nodes, 16 are OpenAIRE NOADs. Table 5 shows the PASTEUR4OA Key Nodes and the OpenAIRE NOADs, listed by PASTEUR4OA's five regions:

- Where the PASTEUR4OA Key Node is also the OpenAIRE NOAD, there is no shading
- Light green shading indicates where the PASTEUR4OA Key Node and the OpenAIRE NOAD are different organisations
- dark green shading indicates the same, but where the PASTEUR4OA Key Node is a project partner
- grey shading shows countries where there is only either a Key Node or a NOAD

Region	Country	PASTEUR4OA Key Node	OpenAIRE NOAD
Nordic	Denmark	Roskilde University Library	University Library Southern Denmark
	Finland	Lappeenranta University of Technology	University of Helsinki
	Iceland	Landspítali University Hospital	Landspítali University Hospital
	Norway	Cristin	Cristin
	Sweden	National Library of Sweden	National Library of Sweden
Eastern	Croatia	Ruđer Bošković Institute	Ruđer Bošković Institute
	Czech Republic	VŠB-Technical University of Ostrava	VŠB-Technical University of Ostrava
	Estonia	Estonian Research Council	University of Tartu Library
	Hungary	MTA Konyvtar	University of Debrecen Library
	Latvia	Library of the University of Latvia	Library of the University of Latvia
	Lithuania	LMT	Kaunas University of Technology
	Poland	Centrum Cyfrowe	University of Warsaw
	Romania	Association AnelisPlus	Kosson
	Slovakia	Slovak Centre of Scientific and Technical Information	Slovak Centre of Scientific and Technical Information
	Slovenia	University of Ljubljana	University of Ljubljana
South East	Bulgaria	Bulgarian Academy of Sciences	Bulgarian Academy of Sciences
	Cyprus	University of Cyprus	University of Cyprus
	Greece	EKT/NHRF	EKT/NHRF
	Serbia	University of Belgrade	University of Belgrade
	Turkey	HACETTEPE	İzmir Institute of Technology
	F.Y.R. Macedonia	Metamorphosis Foundation	
North West	Austria	FWF & OANA	Vienna University Library
	Belgium	FRS-FNRS	Ghent University Library
	France	Couperin	Couperin
	Germany	Helmholtz Association	Library of the University of Konstanz
	Ireland	Health Research Board	Trinity College Dublin Library
	Luxembourg	University of Luxembourg	University of Luxembourg
	Netherlands	TU Delft	TU Delft and DANS
	Switzerland		Hauptbibliothek Universität Zürich
	United Kingdom	Jisc	Jisc
South East	Italy	Politecnico di Torino	CINECA (CASPUR)
	Malta	University of Malta	University of Malta
	Portugal	UMinho	UMinho
	Spain	FECYT	FECYT

Table 5: PASTEUR4OA Key Nodes and OpenAIRE NOADs

6.3.2 Embedding the Knowledge Net in OpenAIRE activities

Because a number of PASTEUR4OA project partners are also OpenAIRE NOADs, there was already awareness within the OpenAIRE project of the idea that the Knowledge Net should join OpenAIRE. Nevertheless, a formal approach was needed and the project management team of OpenAIRE was approached early in 2016.

The OpenAIRE management team received the approach from PASTEUR very positively and so there began a series of teleconferences, email exchanges and meetings during which the principles were discussed. Given the positivity on both sides, PASTEUR4OA put together a concise proposal to OpenAIRE as to how the process of embedding the Knowledge Net in OpenAIRE might take place.

The proposal mapped the activities of the two projects and demonstrated where there were overlaps and complementarities, along with an estimate of the effort required. Overall, it put forward a lightweight approach where the policy related work could be embedded in current OpenAIRE tasks. In this way the policy-specific work could be scheduled as part of OpenAIRE's programme of activities and no extra resources would be required.

Issues that were highlighted included the following:

- (i) **The policy-related activities of the NOADs:** Most future policy-related activities are expected to be performed by OpenAIRE NOADs already familiar with his kind of work. Some of this work is already carried out in OpenAIRE2020. Moreover, many NOADs are already involved in policy work through their roles as Key Nodes in PASTEUR4OA. Indeed, one of the contributions PASTEUR4OA can make to OpenAIRE is to provide more expertise and coordination on policy through those NOADs that have been participating in the Knowledge Net. The proposed activities will be embedded into current OpenAIRE2020 work and systematised through careful work planning and a coordinated approach.

OpenAIRE cannot redirect funding from already-planned project tasks towards policy support activities, so what is suggested is a 'soft' version of engagement with policy work that does not require any extra funding. This can be achieved through redirection of funds or employing unused funds to the value of about 50K per year. The required amount of effort needs to be established and agreed by both projects to develop shared plans on activities and ensure that the activities actually take place.

- (ii) **Structuring the workflow of the policy activities within OpenAIRE2020:** Organisation of policy work to be performed by OpenAIRE and the transition of the Knowledge Net to OpenAIRE will require a structure in order to be effective. Transition of the work from one project to the other, as well as coordination and oversight of policy work within OpenAIRE 2020 will be undertaken by a Policy Working Group, an informal group to be formed within OpenAIRE to steer the work. This working group will likely comprise the current OpenAIRE regional coordinators (i.e. University of Minho, EIFL, University of Oslo and University of Ghent), as well as EKT (the PASTEUR4OA project leader and OpenAIRE project partner and NOAD) and Gottingen University (the OpenAIRE Scientific Coordinator and Coordinator of the NOAD Network). PASTEUR4OA has proposed that EKT undertakes the role of policy coordinator given its role in a policy-oriented project (PASTEUR4OA).

Such an organisation of the workflow reflects the regional structures and working modes both of the Knowledge Net within PASTEUR4OA and the NOADs within OpenAIRE. Communication between members of the group will be by regular teleconferencing and email.

In summary, the following entities will be involved in embedding the Knowledge Net into OpenAIRE 2020:

- A **Policy Group**: to steer and coordinate specific work on policy within the project
- A **select group of NOADs** who are experts on policy and can draft documents for public distribution: produce advocacy materials and other necessary policy support documents, per the planning of the Policy Group. These organisations (EKT, Jisc and University of Minho) will redirect some of their funding toward this activity. Other organisations that could produce advocacy materials might be the University of Goettingen, University of Ghent and perhaps a few others. These organisations will need to dedicate 1PM per year for the remainder of the project to this activity
- **All NOADs**: policy support activities (as described in Table 5 above) – policy-related dissemination, training and policymaker engagement

(iii) **The organisations that participate in the PASTEUR4OA Knowledge Net**: Even though there is not a complete overlap between PASTEUR4OA Key Nodes and OpenAIRE NOADs, embedding the Knowledge Net activities into OpenAIRE should not pose a significant challenge. All NOADs are familiar with policy-related issues, while part of PASTEUR4OA's work was to inform further some of the NOADs who were also members of the PASTEUR4OA Knowledge Net. However, there are some PASTEUR4OA partners who were Key Nodes in the project but are not NOADs: these may be invited to become affiliated members of the OpenAIRE policy network if they wish, so that they can still participate in the dialogue and exchange of information process specifically on policy, albeit unfunded. Some of the PASTEUR4OA partners who were Key Nodes demonstrated low engagement and are expected to opt out of such a possibility. This change means that in some countries two organisations (the NOAD plus the former Key Node) will need to find a way to collaborate to promote Open Access policies in their countries.

The proposed structure and preliminary plans for activities required approval by the OpenAIRE project steering committee which has now been given. The proposed plan of activities, along with a background paper regarding the Knowledge Net was communicated to OpenAIRE NOADs in May. In addition, during the OpenAIRE NOAD meeting which took place in Gottingen on the 6th June 2016, Marina Angelaki and Iryna Kuchma presented the transition process to NOADs on behalf of PASTEUR4OA. The presentation was based on the document already disseminated to NOADs, while the latter had the opportunity to provide feedback and clarify issues pertaining to their future tasks. The response was positive, with the majority of questions focusing on more practical issues such as the reporting of policy related activities. It was also pointed out that PASTEUR4OA partners who are not OpenAIRE members will have the opportunity to work with NOADs and participate in policy related conference calls and they will be regarded as affiliated members of OpenAIRE.

During the meeting it was also highlighted that a special section would be created in the new OpenAIRE website for PASTEUR4OA advocacy resources, an action that at the same time will increase the re-use of

the materials. As the NOAD network forms a key component of OpenAIRE, the policy related activities are expected to strengthen further their role and impact.

Regarding the next steps, EKT (PASTEUR4OA coordinator and policy coordinator within OpenAIRE) will elaborate further on the description of NOAD activities and tasks in collaboration with OpenAIRE's scientific coordinator and the project's regional coordinators to enable the policy-related activities to progress at full speed from September onwards.