TO ACTION, Towards Open Access Coordination Training InnovatiON

Rome, Milan - May 2012, July 2013

EUROPEAN TRAINING FOR OPEN-ACCESS ADOPTION

TO ACTION, Towards Open Access Coordination Training InnovatiON

Downstream training on Open Access in the European Research Area

Giuseppe Laquidara[1], Marika Mazzi Boém[1], Margaret Colombani[1], Marco Padula[2], Paolo Mirabelli[2], Davide Di Pasquale[2], Paolo Scala[2] —

[1]**X23 Ltd,** MIUR Research Archive #60954DHH in Artificial Intelligence, Physics and Cybernetics, Computer Science, Network Science, Non-linear and Complex Systems; Financial Quantitative Modeling, Systems' Dynamics Qualitative Analysis, Quantified Politics - (Rome, Salerno - Italy; Lisbon - Portugal)[1] — Giuseppe.Laquidara@x-23.org;

[2] **ITC-CNR,** Consiglio Nazionale delle Ricerche - Istituto per le Tecnologie della Costruzione, (Milan, Italy) — Marco.Padula@itc.cnr.it

Keywords: Open Access, Technology Transfer, Higher Education, Researcher Training, Mobility, Network of Networks, Life Long Learning, Puzzled Model, European Interoperability, Soustanibility

Submitted to: European Commission, SiS.2013.1.3.3-2 — January 2013

Abstract.

Within the main goal of supporting an open access strategy in the European Research Area, the specific aim of the TO.ACTION project is to spread - among all the relevant stakeholders and agents in the knowledge circulation process -a culture of open access to scientific results generated by publicly funded research.

The project relies on a circular mechanism that allows a continuous and dynamic updating of the training actions and contents, a mechanism able to persist even after the project completion. TO.ACTION will enable easier access to the research literature and may speed up the progress of science itself. The project will do so through initiatives that will raise awareness of OA among a range of other stakeholder groups who are essentially consumers (rather than producers) of OA information. These groups would benefit from a better understanding of the potential that OA represents for their respective goals and the skills needed to access and exploit OA outputs.

[1]**X23 Ltd.** developed To.Action project together with several European institutes, universities and private entities. In particular, contributions came by: **ITC-CNR,** Consiglio Nazionale delle Ricerche - Istituto per le Tecnologie della Costruzione, (Milan, Italy); **Croatian Academic Research Network,** Croatia; **Hanken School of Economics,** Finland; **MOST Foundation,** Spain; **University Complutense de Madrid,** Spain; **Loughborough University,** UK; **Research Information Network,** UK; **Staffordshire University,** UK; **Cyprus University of Technology,** Cyprus; **National Technical University of Athens,** Greece; **MDR Partners (Consulting) Ltd,** UK; **University of Paris Descartes,** France.

1. Scientific and/or technical quality relevant to the topics addressed by the call

Concept and objectives.

Whilst this activity of moving towards open access is well underway in the UK, this is less so in Europe more generally. The aim of TO.ACTION is to speed up the opening up of the research literature and data emanating from publicly funded European Research to develop, improve and consolidate training activities at downstream level and reach the highest number of stakeholders in the European Research Area. This will be achieved through the following objectives, by ensuring that:

- key stakeholders, particularly academic and research staff, have the appropriate skills, know-how and confidence to apply OA methodologies in the publication and dissemination of research results to fully comprehend policy and practical aspects of open access to scientific information; and
- all relevant players, including policy-makers, funding body staff, commercial companies and the wider public, have an appropriate understanding and knowledge of the principles, practices and benefits of OA
- the need to address significant cultural, national and disciplinary differences is recognised from the outset.

Academic and research staff.

Academic and research staff are both producers and consumers of OA information.The development towards more OA has been problematic in particular since scientists are largely unaware of the opportunities they would have to publish in OA journals and to post copies of their published articles in subject or institutional repositories. Likewise many university administration and research funding bodies (and their staff) have not fully grasped how strongly they could influence developments by setting up the right technical infrastructures as well as incentive mechanisms for authors. By the same token it will also be necessary to target EU-funded research project PIs, in particular in those areas not covered by the Open Access Pilot in FP7, in order to prepare stakeholders for the application of open access procedures in Horizon 2020.

Other players.

Beyond the realm of academia, TO.ACTION will enable easier access to the research literature and may speed up the progress of science itself. The project will do so through initiatives that will raise awareness of OA among a range of other stakeholder groups who are essentially consumers (rather than producers) of OA information. These groups would benefit from a better understanding of the potential that OA represents for their respective goals and the skills needed to access and exploit OA outputs. For instance:

- policy-makers, public officials and elected representatives – to reach evidence-based decisions on the setting of public policy and strategy;
- commercial companies, including SMEs – to develop new products and services;
- civil society and the general public – to better inform them and provide them with a means of complementing the already existing wide array of freely accessible information on the internet (ie Wikipedia, social media discussions).

Relevant policy initiatives.

TO.ACTION will build upon existing open access work in the EU (for example, projects such DRIVER II, and CESSDA amongst many others) to train stakeholders in accessing and exploiting existing OA research results – including the 20% of the FP7-funded work made available via the Open Access. The project will also reflect initiatives taken within member states of the ERA, for instance:

- In the UK, £10 million UK government investment was announced in September 2012 to help universities meet the costs of publishing in OA journals. Through this some research-intensive UK institutions will commence the process of developing policies and setting up funds to meet the costs of article processing charges. The UK Funding Councils, via consultation, will also ascertain the extent to which research outputs submitted to any future Research Excellence Framework (REF) – the mechanism which informs the destination of research funding – should be made available in OA.

- Network projects supported under FP7 such as MedOAnet set up to enhance existing policies, strategies and structures for Open Access and to contribute towards new implementations in six Mediterranean countries: Greece, Turkey, Italy, France, Spain, Portugal[2].

Important indexes for information about OA repositories (OpenDOAR, ROAR), funder and institutional mandates (ROARMAP, Sherpa/Juliet), publisher green OA polices (Sherpa/Romeo) and in particular DOAJ (Directory of Open Access journals) which currently is changing its management from on hosting institution to being a research community-driven operation. Networking opportunities will be sought with these projects and other OA initiatives to ensure alignment, exploitation of lessons learnt and adoption of best practice ensuring that TO.ACTION builds on all outputs previously achieved.

The Training .

There is an apparent lack of good training material and good showcases of best practice. The typical training so far has been in form of conference presentations by OA proponents. TO.ACTION will therefore aim to develop the training infrastructure so that it better reflects the needs and aspirations of academic and research staff and other stakeholders. Training will provide the following indicative content:

- insights into the current OA situation;
- demonstrations of the benefits of OA;
- an explanation of the often unclear, copyright, licensing and financial factors associated with OA publication.

Clear examples of workflows associated with depositing material in repositories and data centres, how repository copies should be formatted (for example, first page with metadata). Additional content will be identified via the needs analysis and landscaping in WP2.

Shaped by a user-centred needs analysis (WP2) the training materials will be devised using best practices as identified via learning, e-learning, information and digital literacy research and scholarship (WP4). Organised for delivery in WP3 the training will be synthesised into a new and deliberately learner centred whole (WP4) and draw on readily available multi-media to maximise engagement and impact of delivery (WP5). The training will then be properly disseminated (WP6) and measured and evaluated (WP7). The golden thread of alignment to Horizon 2020 (WP8) will be embedded throughout the training content.

Contribution to the co-ordination of high quality research.

Knowledge and innovation play a more and more central role in the knowledge based society in generating growth and economic improvement. Open Access is one relevant a key-factor in opening research data and results, including publications and data collections, which have to be publicly available and need to circulate widely. To achieve this goal, there is demanding need in raising awareness on OA both in the general public as well as among academics, researchers, policy makers and funding bodies. And yet there is not a proper information on how to exploit OA potentials. TO.ACTION is a coordination action aiming to arise awareness on OA as well as to deliver downstream trainings to focus target groups, who are in the need of understanding OA dynamics, usage and potentials. TO.ACTION will be able to generate benefits to OA by adopting a methodology based on 4 key-processing:

Consultation.

Consultation will stand as a prerequisite for relevant agenda-setting and work planning. The Advisory Board and the Steering Committee will be engaged in ongoing consultations on Open Access topics and policies; these consultation will be the ground-base for setting the outputs and outcomes of the project, allowing stakeholders and influencers to formulate priorities, thus delivering them to the Topics Incubators for further implementation according to the common strategy set. Consultations are key-point of TO.ACTION and will help in avoiding the so-called

[2] http://www.medoanet.eu/project

"cookie-cutter" approach, on the contrary adopting an "on-demand" one, tailored on stakeholders issues and target groups, so maximising specific opportunities. These focus activities will be run all through WP1, where coordination and management will play a relevant role, and WP2, with experts focusing on background scenario and demanding needs related to the target groups.

Leveraging widespread knowledge, capacity as well as arising expertise on OA at national level in EC countries.

The strategy for a proper geographical coverage of the coordination action is based on setting a cooperative link with the so-called "nearby countries" that every TO.ACTION partner country has been coupled with: Italy → Austria and Malta, UK → Ireland, Norway, Finland → the Nordic countries, Spain → Portugal, Poland → the Baltic countries, Croatia → the Balkan countries, Cyprus → Greece, France → Belgium and Germany.This strategy will be adopted also for guarantee a proper dissemination of the training contents and communications/information materials, as each country will be in charge of local+nearby translations, if needed. The strategy will provide a relevant widespread information and knowledge, arising awareness in Open Access issues,so that all EC countries could benefit from growing and more and more stronger linkages not only at national level (inside regional borders) but also at transnational level, bridging the gap in information and improving capability and expertise. These focus activities will be run in WP3, WP4 and WP5 stream actions: OAKPS will be in charge of leveraging information to the general public as well as to arise capacity building, interacting with the Topics Incubators formuling content trainings on the basis of the needs collected during "Consultation". WP5 will be the place for delivering experiences and improve expertise on OA.

Building consensus on mechanisms to guarantee sustainability in the middle and long term.

Building consensus is the way to sustainability, ie ensure better access to scientific information, improving knowledge by providing innovative tools in using Open Access, thus boosting the benefits of public investments in research. As a result, Europe countries will benefit from a faster growth in economy (thanks to increasing innovation), mutual collaboration (greater efficiency), improved quality research results, public inclusion (involvement of citizens and society). Concerted efforts and good practices exchange at transnational level (driven by networking actions) as well as informing all stakeholders and target groups on how to improve access to and use of scientific data, are the key elements for sustainability both within the life time of the project as well as after the EU funding. A broader consensus will lead to the adoption of common policies, while proper trainings will encourage those resistant (researchers as well as innovative enterprises) in sharing "their" data or in investing time in the practicalities of depositing their data, by showing them personal and collective benefits. Measuring the consensum will be a natural step to proven sustainability, setting a framework defining a shared context, collecting data both on local and European level, identifying core values ensuring sustainability, setting indicators and testing them, revising them on the basis of the field evidence. The Observatory, as a final output of the project, will be that body who will share the results of the projects and will spread them out, thus representing a reliable point of reference for OA issues and thus sustaining the project activities after EU funding, thanks to the pan-European memberships coming from the 2year term. WP1, WP6, WP7 will stand as core activities: the networking brought by WP1 (establishing relationships also with other relevant EU FP7 project on OA), the spreading out of the information on the project as well as on the trainings through WP6 dissemination activities, and the in-progress monitoring and evaluation of the results, will contribute to building a strong consensum within the Consortium as well as on transnational level.

Stimulating joint as well as a proactive approach in learning/training processes to deepen OA potentials and foster its use towards EU Commission programmes (H2020).

Consistent with the "Era-communication-towards-better-access-to-scientific-information" delivered by EU Commission on July 12, 2012[3], the coordination action aims to foster collaboration and successful networking for improving the knowledge on OA. As regard H202, TO.ACTION aims to stimulate joints by informing all stakeholders on how to develop and implement open access to results from projects funded by the EU Research Framework Programmes; to encourage circulation of proper info on how to improve access to and preservation of scientific information through H2020 new programmes as well as to foster interaction among policy makers through coordination, also by cooperating with existing e-infrastructures (OpenAIRE). Main topics, delivered by Experts Units, will cover the need to

[3] http://ec.europa.eu/research/science-society/document_library/pdf_06/era-communication-towards-better-access-to-scientific-information_en.pdf

foster peer-reviewed publications; embargo period (6/12Ms) - these issues being related to Green OA; the need to inform all stakeholders about OA publishing costs (eligible while project is running) and further options, ie. possibility to cover later pubblications - these issues being related to Gold OA. WP8 activities will be focused on this issues, Experts Units will be built to stimulate pro-action learning/training processes among stakeholders. The interaction with OAKPs will be primary, acting as the sounding board for the various initiatives and standing as a reliable point of reference to receive information on this very specialistic topic.

Quality and effectiveness of the co-ordination mechanisms, and associated work plan.

The overall strategy of the project is based on a twofold process and a multidimensional approach:

- arising awareness on OA as key-point for improving access to the results of publicly-funded scientific research through networking, analysis and effectiveness, capacity building (establishing relationships and building consensus)
- coordination mechanism for scoping, formulating and delivering downstream trainings on OA (leveraging widespread knowledge, capacity as well as arising expertise)

The first phase will aim:

- to encourage and stimulate partnerships in order to create interest and arise awareness of stakeholders and influencer on OA and on the project goals. The objectives are to reach consensum on priorities in improving access to the results of publicly-funded scientific research, foster cooperation in strategies implementation, involving policy makers, topic network and other running EU projects on Open Access;
- to achieve an evidence-base through a scrupulous and research-base analysis on Open Access gaps, in order to reach effectiveness in the further actions;
- to build capacity through a network of information points (Open Access Information Points - OAKPs), to support general public as well stakeholders (librarians, publishers, policy makers) through the dissemination of proven practices, according to local policies but toward a common scenario;

The second phase will aim:

- to scoping innovative methods as well as content for bridging the gap in Open Access for academic staffs (researchers and students), funding bodies, policy makers, publishers, according to emerging needs drown from the the first phase;
- to produce thematic trainings as a result of the work of experts groups (Topic Incubators) and deliver them to the target groups during 10 months pilot experiences, according to a "learn-improving process".

The project aims to involve the following target audience:
on a general basis:

- general public: to stimulate interest, to broaden information and to stimulate effective participation
- stakeholders (libraries, regional and national NGOs, EU Networks, CSOs): to arise interest and to engender cooperation, even on a local basis
- influencers (decision makers, experts): to arise awareness on Open Access issues specifically, as final beneficiaries of the trainings:
- academic staffs (in particular researchers and students): to show researchers how to use the potentials of Open Access, bringing their work great visibility, circulation, usage, impact and businesses applications (return of investment); to show students how OA could facilitate the use of scholarly information;
- funding bodies staff (private and public bodies and research institutes active in the sector of funding support programmes): to show them how OA could broaden the potentials of funding support as well as opportunities;

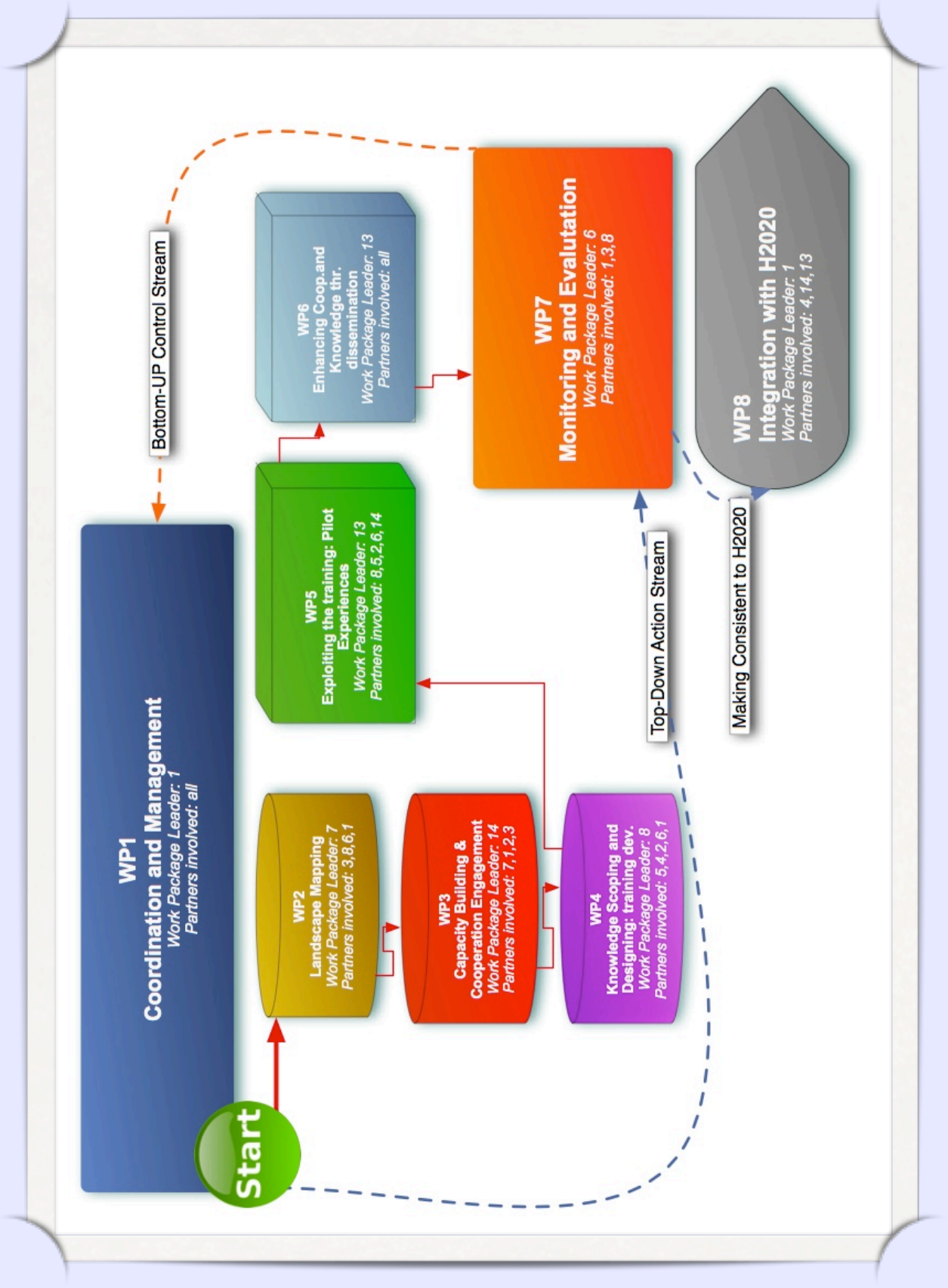
- policy makers (Ministries, Departments, Commissions and Committees in EU partner/nearby countries); to show policy makers how OA could provide them increased ranking and visibility as well as effectiveness in the research field, to stimulate the adoption of OA as a efficient strategic tool
- publishers (Open Access journals): to show publishers how OA could provide new business models to sustain their business as well as to contribute to scientific research.

The overall strategy keep in strong consideration the sustainability, which is ensured by a strong geographical coverage of Europe (the Consortium partners are well sorted and play a strategic role in the European scenario), multilingual effort, multidisciplinary, so that representing the interests of all stakeholders in Open Access.

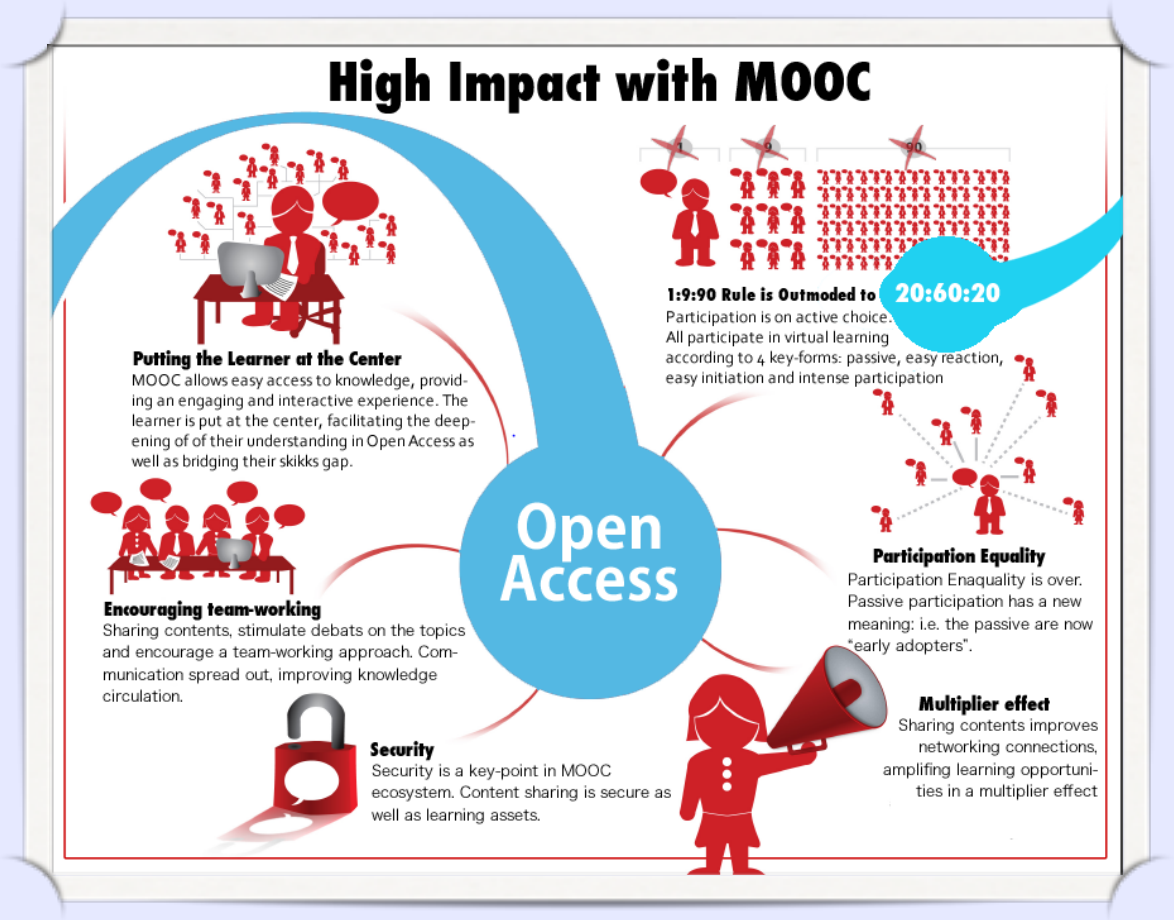
A key element in sustainability will also be the commitment and the support in policy and decision making within the EU Commission, providing also a multiplier effect to the initiative.

The establishment of an Observatory as a deliverable at the end of the project, will stand as a natural prosecution of the actions, giving inputs and stimulus to all actors involved in the Open Access arena.

— Pert Diagram —



Displaying TO.Action Impact whit MOOC



The info-graphic shows the impact provided by the delivering of Virtual Training Courses, through **MOOC** [Massive Online Open Courses], by highlighting six key points:

User [Learner] Center Approach;
Engaging Participation Metrics ~~ 1:9:90 twds 20:60:20 Rule;
Enhancing cooperation [a Team-work approach];
Security;
Participation equality;
Multiplier effect.

Displaying TO.Action Impact on Approaching Open Access

The info-graphic shows the impact on approaching OA, comparing the actual condition [TODAY] to the improved situation [TO.ACTION].
Key-elements are:

- **Reason-why;**
- **Behaviour;**
- **Results**

Risks, and associated contingency plans.

On a general basis, the SWOT analysis points out the following Strengths/Opportunities as well as Weaknesses/Threats.

Strengths	Opportunities
• Multidisciplinary composition within the Consortium • High skilled partners on training, e-learning and evaluation • Strong ability in networking • Consortium partners as influencers in Open Access Arena • High Scientific approach • Cross fertilizing action	• Attract stakeholders interests and involved them in the down streaming training • Getting a proper need analysis regarding OA from every target group perspective • Set a network of information point enabling capacity building on OA
Weaknesses	**Threats**
• Problems arising from Intellectual Property Rights • Difficulty to find and motivate the workgroups members	• Lack of interest by Policy makers • lack of communication within the Consortium

On a more focus scenario, potential risks could be:

- Lack of interest by Policy makers.
  Action: Full involvement in project workshops and seminars: Specific outreach activity to be planned and implemented
- Partners are not reacting as expected, lack of communication.
  Action: Use more interactive communication means. E.g. use the phone when e-mail is not enough.
- Problems arising from Intellectual Property Rights.
  Action: Matters related to management of knowledge and intellectual property handling will be defined in the "Consortium Agreement," where rules will be specified to identify and protect the result of the project especially innovations. During the course of the project each participant executing any task of the project work-plan owns the IPR limited to the new information, new know-how or deliverable generated by its own execution of this specific task of the project work-plan.
- Difficulty to find and motivate the workgroups members.
  Action: Internal meetings for team building and feedback gathering, involving people in the planning stages.
- Difficulty of coordination between partners due to temporary unavailability of WP Leader.
  Action: redundancy of coordinating structure with the establishment of a Backup Leader for each WP.

Specific actions to mitigate the foreseen and unforeseen risks will be carried out by a Quality Control Board through the redaction of a Risk Identification and Management Plan as specified in the following section and in WP1.

2. Implementation

Management structure and procedures.

The organisation structure of the project and decision-making mechanism is planned as follow:

A. **Core Decision Structure: the Steering Committees**

To ensure efficiency, a Steering Committee (SC) will be set up; it will be responsible for defining and agreeing outcomes and output with partners, monitoring the progress (in terms of planning and milestones), carrying out the quality evaluation, detecting barriers and defining appropriate solutions. The SC it will be the body in charge of managing the overall structure and the direction of the project, including conflict resolution of disputes between the participants in the project as well as Risk Management procedures. The SC will also decide on problems associated to secondments, ethical questions and gender issues.

The SC will be composed by the following key-players:

i) 1 Project Coordinator (PC, CNR, leader WP1): taking the overall responsibility of WP1, in strong relationship with the PM and the support of the WP-BL. He will be in charge of the consortium agreement, reports to EU as required, financial management, liaison and meeting organisation; he will compile a Final Report detailing the progress of the project from its start to the end
ii) 1 Project Manager (PM, X23, leader WP5 and WP6) : engaged in the management of the workflow, monitoring all activities and ensuring partners will meet deadlines, optimising the workflow from WPs' leaders to the EC (activity which implies periodic documentation on the progress of scientific/technical and financial aspects of the project activity, including transnational meetings, and internal meetings), supporting the Project Coordinator's activities. The support is mainly addressed to the management of technical and financial aspects of the Project activities, with the Coordinator as intermediary between the Consortium and the EC
iii) 1 WP Backup Leader, representing all Backup Leaders (BL, CUT, WP1 Backup Leader): To minimise the risk at each WP a redundant system will be adopted: each WP leading partner will be paired to a Backup Leader (WP-BL). This means that the two partners will work closely together and have a teleconference to discuss the progress of the WP tasks every 15 days. In case that during the project the WP-Leader cannot be available and actively involved then the standby partner will take over the leadership of the WP
iv) 8 Project Partners (PP, played by the leaders of each WP)
v) 1 Dissemination Manager (DSM, X23, leader WP6): in charge of supervising all communications activities
vi) 1 Didactics/Knowledge Manager (DKM, Staffordshire, leader WP4): in charge of supervising scoping activities and formuling the methods as well as the training contents

The Steering Committee will be called to a face to face conference twice during the life of the project: once approx in the middle of the project duration to receive the interim reports from the WPs leaders, and once at the end of the project to receive the results. Intermediate phone conferences or webinars may be held if needed.
The SC will meet virtually by Skype conference call after every milestone, in order to check contingencies and plan forthcoming initiatives.

B. Quality process assurance: Quality Control Board (QCB)

A select group responsible for the Quality Assurance and Risk Management will be formed. The Quality Control Board (QCB) will be composed by the following actors:

i) the PM (responsible for the management and optimisation of the workflow)
ii) the QM (to be rotary selected by the PC and the PM among the Consortium partners every 8 months; responsible for the operative workflow related to the Project Quality and Assessment Plan and has the authority to organise and verify all work affecting quality)
iii) two Consortium representatives selected among the partners and appointed by the PC (acting as internal reviewers)

The QCB will be responsible for the quality procedures of the Project, reporting to the PC and the SC and it is in charge of monitoring quality procedures according to suitable standards.
The QCB, through the QM, will monitor the evolution of the project according to the quality indicators and metrics which will be discussed during the kickoff meeting; it will report to the SC about any significant deviation to be corrected, as the un-achievement of each success indicator; through QM and PM, it will elaborate the Risk Identification and Management Plan.

In case of crucial problems, an Internal Audit Procedure will be set with the participation of the PC and the SC.

C. Operational working structure: Open Access Knowledge Points (OAKPs), Topics Incubators (TIs), Communication Staff (CS), Open Access Experts Units (OAEU)

To run the activities in WP3, a network of Open Access Knowledge Points will be established: 2 OAKPs per each participating country. The network will be managed locally by each Project Partner and supervised at European level by the Didactics/Knowledge Manager. The OAKPs will be closely linked to Topics Incubators and the Communication Staff, as they will be in charge of capacity building on Open Access topics, disseminate information related to specific topics/issues. Their activities will be strongly interdependent.

To run the activities in WP4, 3/4 working groups - Topics Incubators - will be established, bringing together the expertise and skills of OA experts coming from Consortium partners as well as external qualified stakeholders or consultants, if needed. Topics Incubators will be managed by each Project Partner and supervised by the Didactics/Knowledge Manager. They will act receiving issues and needs delivered from the OAKPs and continuously improve training contents to be delivered during the pilot experiences and disseminate by the Communication Staff.

To run the activities in WP6, a Communication Staff will be established: 1/2 members from WP6 partners, managed by the Dissemination Manager (6 members). The Communication Staff will steadily cooperate with OAKPs, TIs and OA Experts Units, working together on the production of internal and external dissemination material and setting the agenda for the dissemination events.

To run the activities in WP8, 3/4 OA Experts Units will be formed. Those Experts Units will be composed by 1 expert member coming from Topics Incubators and their activities will be managed by the Didactic/Knowledge Manager. OAEU will be strongly interdependent with Topics Incubators for getting analysis on target groups and training

contents as well as with the Communication Staff for producing ad hoc dissemination material needed.

D. Advisory framework: Advisory Board (AB)

An Advisory Board (AB) will be set up and it will include representatives of the policy makers, of the funding organisations, Academics, International Publishers and a representative of Scientific Authors/End Users and OA promoters. It will provide the SC guidance, input, stimulus and peer review on the activities of the project and outline specific contingencies expressed by the Open Access arena.

Virtual and possibly at least one face-to-face meetings will be required.. Business will be dispatched by consensus between the AB members, but if voting is necessary, decisions will be made by a majority vote.

At the moment have expressed interest in joining that Advisory Board: UNESCO (to indicate needs to be satisfied, initiatives about Open Access that we can support or disseminate and use for capacity building and policy making/adoption, or to which supply information materials and tools -UNESCO is developing a training kit, published a policy guide and maintain a capacity building portal on OA-), OASPA (providing speakers/ lecturers for training sessions, contacts and suggestions as training modules are developed and ad hoc support and information), Science Europe and CERN (once the coordination action starts, without endorsing any specific project).

3. Impact

Expected impacts listed in the work programme.

In the following is summarised how To.ACTION will contribute towards the impacts expected for projects under SiS.2013.1.3.3-2: Downstream training on Open Access in the European Research Area.

Expected impact 1: To spread/increase knowledge of open access related issues in order to reach a wide range of communities and geographic areas
The project is a true European collaboration aimed at raising awareness and educate on the whole spectrum of OA issues, involving partners from 10 EU countries which have a established networks within and outside the ERA. This will enable them to reach the great majority of countries in the ERA despite the challenge of heterogeneous national contexts (see WP3, 5).

Furthermore, TO.ACTION addresses all the communities of stakeholders involved in the process, tailoring different kinds of intervention to different classes of learners; more specifically, the categories that are recipients of the project are: researchers, academics, policy-makers, commercial companies and, broadly speaking, civil society and the general public. The project operates along two parallel strands of action: training the communities of stakeholders that are producers and managers of scientific results from one side, and raising awareness among the communities of stakeholders that are consumers of scientific results from the other.

To.ACTION creates innovative imaginative training material (e.g. short, smart animated video clips), ad hoc developed for learners not able to follow a formal education path; the project also involves already existing qualitative training material on OA and will develop training material in continuity of quality with existing training material assessed by matter experts in various countries and included in the training collection .

Engaging, creative and tested training methodologies will be used to deliver training . An innovative virtual learning framework - "The Primate" - will play an important role in this. There is a clear opportunity to test the training material during the project and to measure the short-term impact via feedback.

To.Action will itself powerfully exemplify Open Access principles. This will be achieved by making and promoting the training resources it develops available through open access for re-use.

The project will have a long term impact, as the society will have access to this training material beyond the scope of the project.

4. INDICATORS

Expected impact #1 typology.

Expected number of countries involved; Expected number of stakeholders communities addressed; Expected numbers of learners; Expected number of decision-maker stakeholders made aware of the issues; Expected number of training modules designed; Expected number of classes; expected number of events (workshops, conferences)

Expected impact #2 typology.

To contribute to changes in behaviour that are consistent with the ideals underlying open access. Each training module and each awareness raising event (within the wide variety developed by the project) contains a part showing the benefits of open access, even through the illustration of quantitative studies available in the literature.
Stakeholders in the decision making layers about the scholarly communication process can be very influential in changing the behaviour of researchers with respect to open access, particularly with respect to the legitimation of OA for the career progression of researchers. In view of this fact, great efforts will be devoted in the involvement of the largest number possible of decision makers.
In order to speed the innovation, special attention will be paid to making stakeholders from industries aware of the availability of open data sharing, enabling a more rapid application of scientific results to the market. Even the traditional opposition to OA by commercial publishers could be removed in favour of new forms of business deriving from the development of new metrics for evaluating the scientific reputation of researchers.
Jointly the project partners have the capacity, experience, and networks necessary to deliver a new approach on Open Access, involving the so-called resistance in adopting Open Access policies (towards a common one, but taking in consideration local standards), thus contributing to a real behavioural changing in the understanding Open Access.
Expected increase of the number of articles submitted according to Green and Golden Open Access (researchers, students); increase the settlement of new Open Access repositories by goverment bodies (policy makers); capturing the interest of commercial publishers for new tools and services.

Expected impact #3 typology.

To prepare stakeholders for the application of open access in the European Research Area, in particular as regards Horizon 2020. The Horizon 2020 could be the occasion to promote a model of research project that fits the current requirements of R&D in terms of common features to improve access to research results.
Impact on Horizon 2020 provides a set of recommendations or guidelines for each Horizon 2020 project proposal to have to:

- produce research results not only “accessible”, but also “sharable” (in terms of format, metadata, access data, ...);
- insert a specific work package for this purpose or enlarge the work package on dissemination with the technical documentation for re-using and/or accessing project results.

The project partners consider that there is a need to openly discuss the opportunities and risks related to research employing OA principles and the future of OA in the ERA. Via webinars,

online collaboration groups and debates (see WP8) we plan to discuss these factors and bridge the gap between the applicants and EU regulators. The impact of these actions are twofold - on one hand, the voice of the applicants will be heard at the EU policy makers level, which on the other hand have a direct impact over the requirements and standards of the calls in the period 2014-2021.

Furthermore, To.ACTION Open Access Observatory will build a bridge towards Horizon 2020 whilst the new programme beds downt. The multi-faceted observatory envisaged will provide a touchstone and reference point on Open Access for stakeholders of all kinds considering the role of OA under Horizon 2020, providing opportunities for its sustained further development under the new programme.

Expected impact #4 typology.
Guidelines supporting funding bodies on the OA matter and role in project proposals; funding bodies setting new rewarding mechanism to stimulate the sharing of research data; increase awareness by funding bodies of the relevance and concrete implication of OA for the benefit of research.

Additional Project impact typology.

To.ACTION prepares a Monitoring and Evaluation framework for OA topics
The creation of M&E in relation to OA also provides the opportunity to develop M&E methodologies that relate to information and knowledge management capabilities and their value and begin to establish measurable benchmarks of progress and behavioural changes that can be assessed as a series over time. This is relatively underdeveloped and will be a major contribution to the EU in terms of the developing the information and knowledge based economy. Furthermore the focus on human capabilities and the capacity to manage and utilise data, information and knowledge responds to the positive shift in emphasis from technological infrastructure which, although important, underplays the significance of human resources.
To.ACTION raises awareness among a wide range of stakeholders groups
Of course the main target are the groups defined in wp4: trainers, academics and researchers, students, funding bodies and policy makers, publishers, librarians and resource managers. However, there is a larger audience which needs to be educated including public sector institutions (building on and extending through direct training the awareness raising work[4] done to support policies which open up government information for re-use), application developers, SMEs and civil society organisations,. Their level of engagement in the topic of OA is sometimes lower than of the target groups, but these audiences contribute to the more general social awareness and acceptance towards the topic of OA. We will be reaching these groups through contemporary channels like social media (communities and pages on Facebook, LinkedIn, Twitter, Vimeo) and pave the way to a OA-aware society.
To.ACTION establishes an Observatory to sustain the objectives after the lifetime of the project. The Observatory, as a final output of the project will make the project results and material freely available and will spread them out, thus representing a reliable point of reference for OA issues and thus sustaining the project activities also after EU funding, thanks to the pan-European collaboration team coming from the 2 year term. The establishment of the TO.ACTION Observatory will pave the way for further development of the project. Its investigation, advising, networking and monitoring activities could provide further information and results on Open Access.

[4] http://epsiplatform.eu/

ANNEX

Annex 1 — Physical Modules Training Delivery.

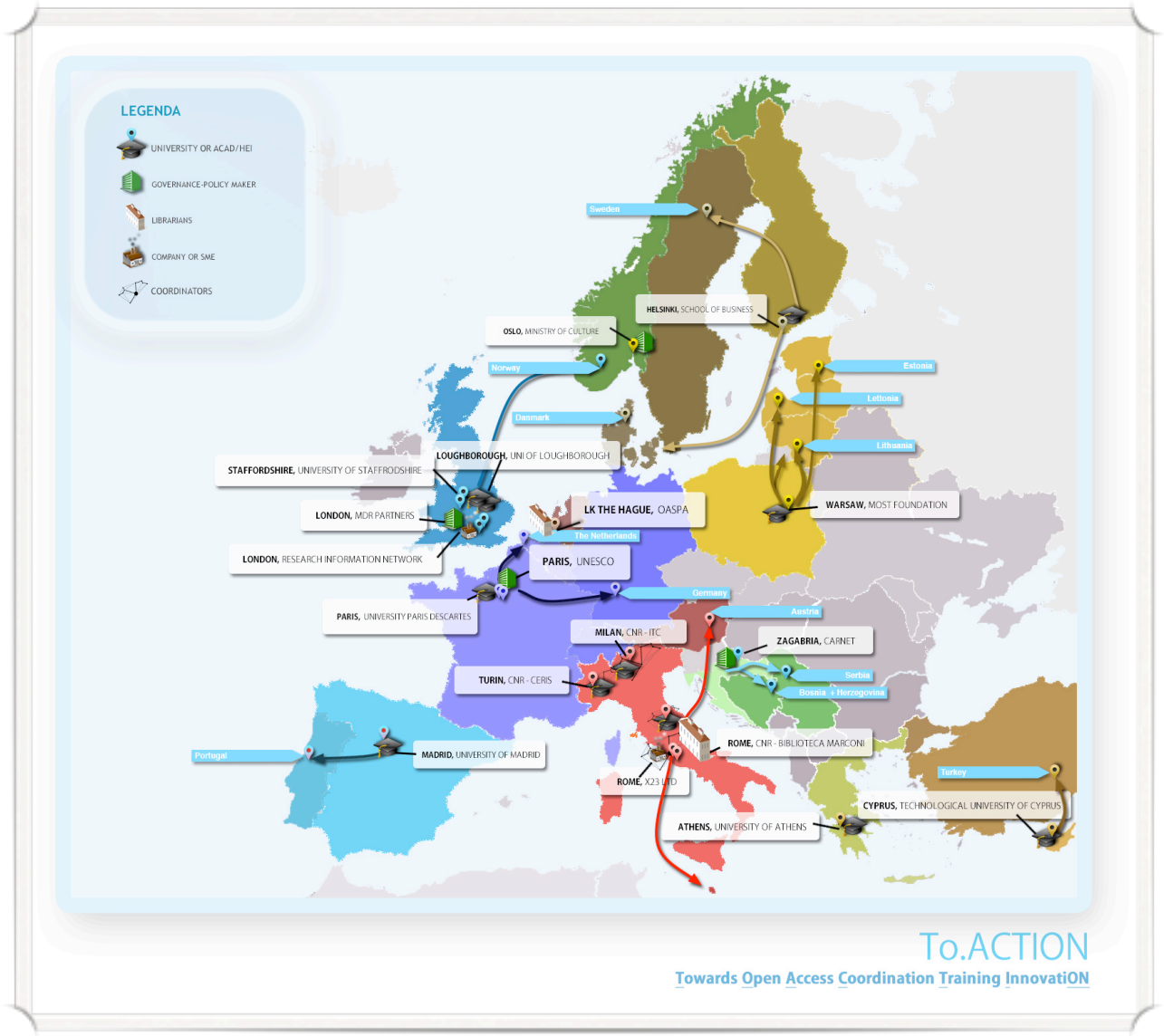
Countries	Training for trainers 2 national per participant country 1 per each nearby country 1 day orientation f2f, in English	Training for policy-makers f2f flexible 1-7 days 1 events per month per participant country 1 per each nearby country, in English and national languages	Training for funding bodies stuff - national f2f flexible 1-7 days 1 events per month per participant country 1 per each nearby country, in English and national languages	Training for academic staff (researchers, students) f2f flexible 1-7 days 1 events per month per participant country 1 per each nearby country, in English and national languages	Training for publishers national f2f flexible 1-7 days 1 events per month per participant country 1 per each nearby country, in English and national languages
Italy — nearby countries: Austria + Malta	1*2+2*2	1*4+1*2	1*4+1*2	1*4+1*2	1*4+1*2
Croatia — nearby countries: Balkan + Baltic countries — in joint w/ Poland partner	1*2+2*2 1*2+2*2	1*4+1*2 1*4+1*2	1*4+1*2	1*4+1*2	1*4+1*2
Cyprus — nearby countries: Greece and Turkey	1*2+2*2	1*4+1*2	1*4+1*2	1*4+1*2	1*4+1*2
Spain — nearby countries: Portugal	1*2+2*2	1*4+1*2	1*4+1*2	1*4+1*2	1*4+1*2
UK — nearby countries: Ireland + Nordic countries — in joint w/ Finland + Norway partners	1*2+2*2 1*2+2*2	1*4+1*2 1*4+1*2	1*4+1*2	1*4+1*2	1*4+1*2
France —nearby countries: Germany and Belgium	1*2+2*2	1*4+1*2	1*4+1*2	1*4+1*2	1*4+1*2

Countries	Training for trainers 2 national per participant country 1 per each nearby country 1 day orientation f2f, in English	Training for policy-makers f2f flexible 1-7 days 1 events per month per participant country 1 per each nearby country, in English and national languages	Training for funding bodies stuff - national f2f flexible 1-7 days 1 events per month per participant country 1 per each nearby country, in English and national languages	Training for academic staff (researchers, students) f2f flexible 1-7 days 1 events per month per participant country 1 per each nearby country, in English and national languages	Training for publishers national f2f flexible 1-7 days 1 events per month per participant country 1 per each nearby country, in English and national languages
TOTAL	40	36	36	36	36

Annex 2 — Virtual Training Modules Delivery.

Basic Module		Advanced module			Target oriented module	
x	x	x	x	x	Researchers	Researchers
					Students	Students
					Founding Bodies	Founding Bodies
					Policy Makers	Policy Makers
					Trainers	Trainers

Annex 3 — To.Action European Strategy for Geographical Coverage.

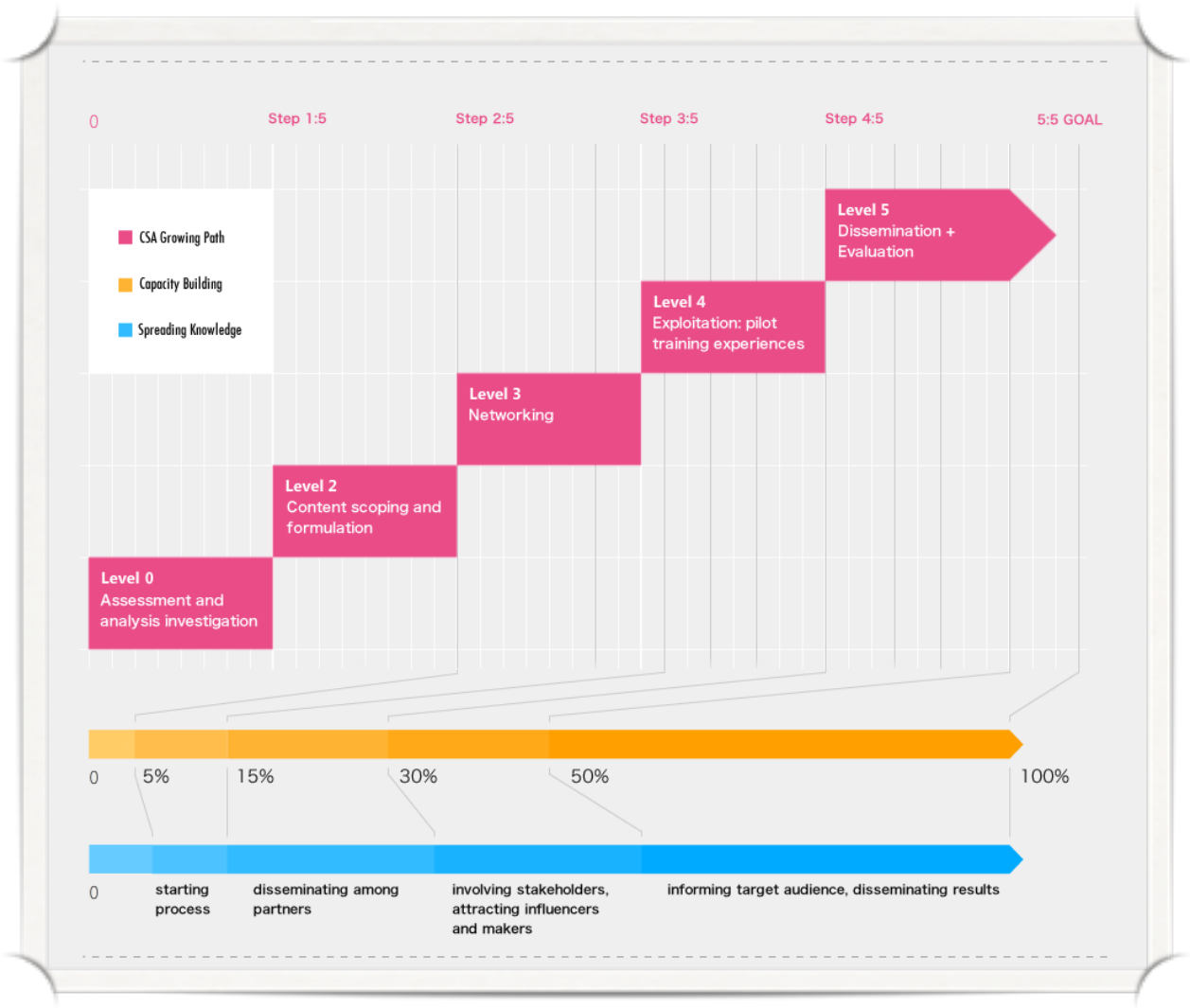


The strategy for achieving a proper geographical coverage of the coordination action is based on setting a cooperative link with the so-called "nearby countries", that every TO.ACTION partner country has been coupled with:

Italy → Austria and Malta,
UK → Ireland, Norway,
Finland → the Nordic countries,
Spain → Portugal,
Poland → the Baltic countries,
Croatia → the Balkan countries,
Cyprus → Greece,
France → Belgium and Germany

The presence of three international bodies [UNESCO, OASPA, CERN] will guarantee an even wider geographical coverage.

Annex 4 — TO.Action CSA Growing Path.



The info-graphic shows the in-progress steps of the Coordination mechanism, related to the main objects of Capacity Building and Knowledge spread.

It is divided into five growing steps, from the very start of the project [Time 0] to the results achievement [the Goal].

References.

- Antelman, Kristin. "Do open-access articles have a greater research impact?." College & research libraries 65.5 (2004): 372-382.

- Harnad, Stevan, and Tim Brody. "Comparing the impact of open access (OA) vs. non-OA articles in the same journals." D-lib Magazine 10.6 (2004).

- Harnad, Stevan, et al. "The access/impact problem and the green and gold roads to open access." Serials review 30.4 (2004): 310-314.

- Swan, Alma. "Open access and the progress of science." American Scientist 95.3 (2007): 197.

- Hajjem, Chawki, Stevan Harnad, and Yves Gingras. "Ten-year cross-disciplinary comparison of the growth of open access and how it increases research citation impact." arXiv preprint cs/0606079 (2006).

- Eysenbach, Gunther. "Citation advantage of open access articles." PLoS biology 4.5 (2006): e157.

- Willinsky, John. "The unacknowledged convergence of open source, open access, and open science." First Monday 10.8 (2005).

- Velterop, Jan. "Should scholarly societies embrace open access (or is it the kiss of death)?." Learned Publishing 16.3 (2003): 167-169.

- Willinsky, John. "The access principle: The case for open access to research and scholarship." (2006).

- Collins, James P. "May You Live in Interesting Times: Using Multidisciplinary and Interdisciplinary Programs to Cope with Change in the Life Sciences: Multidisciplinary and interdisciplinary research and training programs provide life science departments a way to foster the innovation needed to cope with rapid change in biology." Bioscience 52.1 (2002): 75-83.

- Scott, Peter. The Meanings of Mass Higher Education. Open University Press, 1900 Frost Road, Suite 101, Bristol, PA 19007, 1995.

- Boninger, Michael L., Rachel E. Cowan, and Benjamin J. Fregly. "Structures promoting research, training, and technology transfer in mobility: lessons learned from a visit to European centers." Journal of neuroengineering and rehabilitation 9.1 (2012): 1-5.

- Reinkensmeyer, David J., et al. "Major trends in mobility technology research and development: overview of the results of the NSF-WTEC European Study." J Neuroeng Rehabil 9 (2012): 22.

- D'Este, Pablo, Frederick Guy, and Simona Iammarino. "Shaping the formation of university–industry research collaborations: what type of proximity does really matter?." Journal of Economic Geography 13.4 (2013): 537-558.

- Xia, Jingfeng. "Diffusionism and open access." Journal of Documentation 68.1 (2012): 72-99.

- Veugelers, Reinhilde. "Improving Europe's industry-science links." Science, Innovation, Firms and Markets in Europe (2012): 33.

- Hynes, Martin, et al. "Excellence, Equality and Entrepreneurialism Building Sustainable Research Careers in the European Research Area." Report of the Expert Group on the Research Profession. Brussels: European Commission, Directorate General for Research and Innovation (2012).

- Ackers, Louise. "INTERNET MOBILITY, CO-PRESENCE AND PURPOSE: CONTEXTUALISING INTERNATIONALISATION IN RESEARCH CAREERS." Sociología y tecnociencia/Sociology & Technoscience/Sociologia e tecnociência 3.3 (2013): 117-141.

- Huber, Franz. "Do clusters really matter for innovation practices in Information Technology? Questioning the significance of technological knowledge spillovers." Journal of Economic Geography 12.1 (2012): 107-126.

- Venditti, Michelina, Emanuela Reale, and Loet Leydesdorff. "Disclosure of university research to third parties: A non-market perspective on an Italian university." Science and Public Policy (2013): sct027.

- Kearney, Mary-Louise, and Daniel Lincoln. "Research universities: networking the knowledge economy." Studies in Higher Education 38.3 (2013): 313-315.

-