



European
Commission

February 2016

DIRECTORATE-GENERAL FOR RESEARCH AND INNOVATION (RTD)

Draft European Open Science Agenda

Policy action	Objectives/Need to act	Required action	Implementation at EU level /Responsible party (Commission, pan-European interest organisations)	Implementation at National Level (Policy makers, funders, research performing institutions, researchers, citizens)	Supporting evidence (public consultation and stakeholder organisation views)
Foster Open Science	Raise awareness and support take-up by stakeholders	Organise debates at national and European levels	Establish a Policy Platform at European Level and a self-regulation/ clearinghouse mechanism addressing Open Science issues Provide H2020 support, e.g. in the form of prizes	Organise debates at national level	Large majority support stakeholder 'bottom-up' approach Wide stakeholders support and Nov 2014 SIS-RRI Italian Presidency conference
	Reinforce stakeholders' ownership and trust	Involve representative stakeholders		Establish a policy on Open Science together with national stakeholders	
	Support a better knowledge circulation within science and society	Provide specific support for spreading Open Science good/best practices	Implementation of an Open Science Monitor International Collaboration (established dialogue with Japan and under OECD)		

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	<p>Enable more reliable science (by allowing data verification); more efficient science (by sharing resources); and more responsive science (by contributing to addressing societal challenges)</p> <p>Foster research integrity</p>	<p>Provide incentives to make scientific work openly available as early as possible</p>	<p>Establish a European Research Hub (comparable with e.g. Research Gate) as the social media for all H2020 Researchers and beyond</p> <p>Promote Citizen Science</p> <p>Develop an evaluation model for citizen science</p>		<p>Strong stakeholders support (more than 80% agree)</p>
Remove barriers to Open Science	<p>Lack of credit for Open Science activities of researchers</p>	<p>Reward researchers engaged in Open Science activities (career development)</p>	<p>Set out the general principles and requirements of how Open Science should affect the roles, responsibilities and entitlements of researchers and of their employers</p> <p>(and ensure their diffusion and</p>	<p>Recognize new professions e.g. Establish a professorship on Openness, on Big data management, data mining etc.</p>	

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			take-up through the future 'single' code of conduct for researchers)		
	Quality assurance and impact of Open Science'	Promote a discussion on evaluation criteria of research	Consider alternative evaluation criteria for FP.9 Development and research on alt-metrics		Strong stakeholder support
		Experimenting with more open peer review	Research on Open Peer review	Asses the maturity of open peer review as a standard in research institutions	
Need to remove obstacles to the involvement in research (as co-producers) of non-academic actors	Allow research funders to provide specific incentives for 'collaborative science' including societal actors and citizen science	Consider adapting The Rules for Participation and/or Model Grant Agreement to enable launching Open Science pilots (e.g. under H2020)	Citizen science eligible for funding. Introduce openness as criterion for receiving research funding	Strong stakeholders support (more than 80% agree)	

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	Need to address legal constraints and uncertainty regarding the use of Text and Data Mining (TDM) techniques	Better taking into account of public benefits, social interest and the situation of academics and innovative industries when reviewing the European copyright legislation	Exempt TDM for scientific research activities from European Copyright legislation for both commercial and non-commercial purposes	Depending on the revision of the EU legislation on the matter	Licences for Europe' initiative, DG RTD Report from the Expert Group on TDM, consistent call from various stakeholders
	Need to address legal constraints for using personal data in (health) research	Better taking into account of public benefits and the social interest when reviewing personal data protection	Create a research exception under the General Data Protection Regulation /corresponding delegated or implementation act		
	Increase Open Science Need to address low e-skills amongst researchers and	Improve expertise and guidance	Foster/support the uptake of voluntary introduction of academic modules for open	Analyse current competency levels (research	Consistent call from various stakeholders

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	underuse of professional support (librarians, repository managers etc.)		science skills. Support a central organization of training material on Open Science	organisations) Adapt university curricula to new needs Pilot a EU Certificate of Open Research	
Develop research infrastructures for Open Science	Increase effective inter-connexion of existing research data infrastructures for Open Science	Federate existing data infrastructures and provision of baseline facilities for the long tail of science	Support the further development of open science infrastructures (through e.g. a research cloud) for data, protocols and methodologies	Align and coordinate existing and emerging strategies for scientific data infrastructures	Consistent call from various stakeholders in the Science 2.0 consultation
	Enable access, sharing and re-use of research data across disciplines and EU borders	Implement data-sharing principles (e.g. G8 principles / FAIR)	Coordinate at European Level the funding / maintenance and interoperability of scientific data research infrastructures Develop a plan for long-term preservations of research data and results	Seek economies of scale for the provisioning of research data services	Position and white papers of e-IRG, EGI, CERN EGI Lisbon e-IRG Riga Council

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	Enable data-intensive research in secured virtual environments for open science	Enable Big data solutions in secured virtual environments to generate smart solutions for analysing complex data from different sources	Support the development of common interfaces, and data standards and software whenever appropriate	Create incentives for skill transfer in data analytics and cloud technology for research	Conclusions ERA of Innovation Conference panel
Mainstream Open Access to research results	Further develop and implement the principle of open access to publically funded research results (Plus ensure follow-up and monitoring) Explore alternative ways of releasing research results, of commenting on them, on measuring their impact in all	Improve and streamline existing Open Access policies in Europe	Monitor the H2020 Open Research Data Pilot Develop a full-blown policy on open access to research results in the next Framework Programme, including publications, data, and also software, and methods/algorithms. This should include guidelines for addressing IPR issues and the funding of	Follow up with EU Member States on the 2012 Recommendations on [access to and preservation of] Scientific Information Review the uptake of 2012 Recommendations	Open Access is recognised as a top issue and a priority by various stakeholders and by Member States

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	aspects of the society, and of ensuring to researchers the most economically sound access to scientific knowledge and new discoveries		data management activities		
		Market actors need to develop alternative business models for publishing	Publishers are in transition to business operators offering a diverse set of (open science) services		
Embed Open Science in society	Need to foster stronger relation between science and society as well as science and business actors to accelerate innovation	Better network societal, entrepreneurial and scientific actors through e.g. 'knowledge coalitions'	Set up and support 'knowledge coalitions' to address common societal challenges as per H2020. Implement Joint Open Science Initiatives (JOSI's)	Invite companies/SME's and universities to events to brainstorm around different business opportunities	Stakeholder consensus on the need to address societal challenges and faster and wider innovation