



OpenAIRE welcomes the opportunity to respond to the European Commission Green Paper on a Common Strategic Framework for future EU Research and Innovation Funding. We focus our responses on questions 13, 20, 25, due to the consortium's expertise in building and operating an infrastructure based on the network of institutional repositories.

About OpenAIRE / OpenAIREplus

OpenAIRE (Open Access Infrastructure for Research in Europe: <http://www.openaire.eu>) is a three-year EC-funded project implemented by 38 partners covering almost all 27 European Union member states and one associated state (Norway). OpenAIRE's three main objectives are to

- **build support structures** for researchers in depositing FP7 research publications through the establishment of the European Helpdesk and the outreach to all European member states through the operation and collaboration of **27 National Open Access Desks**;
- **establish and operate an electronic infrastructure** for handling peer-reviewed articles as well as other important forms of publications (pre-prints or conference publications). This is achieved through a portal that is the **gateway** to all user-level services offered by the e-Infrastructure established, including access (search and browse) to scientific publications and other value-added functionality (post authoring tools, monitoring tools through analysis of document and usage statistics);
- work with five subject communities to *explore* the requirements, practices, incentives, workflows, data models, and technologies to deposit, access, and otherwise **manipulate research datasets** of various forms in combination with research publications.

OpenAIREplus, a project starting by the end of 2011, will extend and enhance the open-access infrastructure and services developed by OpenAIRE. This will include the linking of publications with datasets, enriching the information space and establishing connections with other infrastructures and services.

TACKLING SOCIETAL CHALLENGES

Q13. How could EU research and innovation activities attract greater interest and involvement of citizens and civil society?

Scientific results are still too much hidden for non-professionals and should be opened up as much as feasible. Libraries play a key role in communicating results of EU research and innovation to citizens and civil society. They are involved in open access, open science and open innovation movements, changing the way research and learning are performed, and



opening up the way research is carried out and communicated. New research practices can work effectively only in an open, collaborative environment and one of the examples is citizen science – projects or ongoing program of scientific work in which individual volunteers or networks of volunteers, many of whom may have no specific scientific training, perform or manage research-related tasks such as observation, measurement or computation. These networks allow scientists to accomplish research objectives more feasibly than would otherwise be possible. In addition, these projects aim to promote public engagement with the research, as well as with science in general. When the full record of scientific research is made publicly available this enables scientists, prospective students, civil society organizations, future employers and others to obtain detailed descriptions of procedures, raw and analyzed data to either compare with their own work or to build on. This can improve the communication of science, increase the rate at which research can progress, and reduce time lost due to the repetition of failed experiments.

[STRENGTHENING COMPETITIVENESS](#)

Q20. How should intellectual property rules governing EU funding strike the right balance between competitiveness aspects and the need for access to and dissemination of scientific results?

The EC's Open Access Pilot aims to ensure that results of EC-funded research are disseminated as widely and effectively as possible, and to guarantee maximum exploitation and impact. Open Access to research articles helps to increase the impact of the EU's investment in research and development and to avoid wasting time and valuable resources on duplicative research. SMEs and entrepreneurs can also benefit from improved access to the latest research developments to speed up commercialisation and innovation. The **Digital Agenda for Europe** endorses the principle of Open Access to scientific data and papers. The EC should aim to make Open Access the general principle for projects funded by the EU research Framework Programmes (as stated in **Europe 2020 Flagship Initiative Innovation Union**) and ensure not only free access but also rights for use and re-use. The latter is of particular importance to enhance the use and reuse of these materials in learning and research environments and to allow machines to index and data mine this information, as well as to enable any future scenarios.

The rules set by the EU play a very important role for the copyright legislation in EU member states. There is still an eminent need to set general rules in the national legislation to secure authors' rights for dissemination and reuse of their publications, with embargo periods not beyond 12 months since publication.

[STRENGTHENING EUROPE'S SCIENCE BASE AND THE EUROPEAN RESEARCH AREA](#)

Q25. How should research infrastructures (including EU-wide e-Infrastructures) be supported at EU level?

The European Commission together with the member states should identify key research infrastructures (including EU-wide e-infrastructure) and support them in order to empower researchers with an easy and controlled online access to facilities, resources and



collaboration tools, bringing to them the power of ICT for computing, connectivity, storage and instrumentation. More specifically, emerging research infrastructures should:

- Offer open access to data *and* services, making them easily discovered and accessed by everyone, not only researchers. European and/or national policies are a vital element towards this direction and should be established and aligned to the greatest possible extend.
- Investigate methods and researchers behaviors and provide appropriate services for content sharing and data re-use, aiming at researchers' collaboration and research innovation.
- Explore interoperability issues between infrastructures and define standards to further advance cross discipline interactions and enable the re-use of data and services across multiple domains. In the global scheme of things, it is crucial that European infrastructures are linked to international ones.
- Integrate existing or add new services and tools (scientific instrumentation included) which will help in better utilizing and understanding the underlying data. It is important to build synergies with the industry and SME's so as they benefit from the infrastructure "openness" and build additional services for the researchers and the general public.
- Align with national infrastructures and initiatives and follow a decentralized scheme to allow for better sustainability and operation. Investigate new technologies (e.g., cloud computing) for cost efficient operation.
- Cover all Europe and ensure that infrastructures are spread over a extensive region. While, possible disjoint or disproportional national to European infrastructures may restrain and limit innovation, it is very important not to duplicate effort and cost.
- Investigate cross-discipline/horizontal efforts so that infrastructures become open to new ventures and new trends (e.g., how can infrastructures can be efficiently utilized by the younger researcher generation and their attitudes arising from social networks, how can the infrastructures measure the effectiveness and impact of the output research, or how can they measure their use by the different stakeholders).

Moreover, the EU should support and enhance the further investment and development of the operational repository network established in the FP7 Open Access Pilot (as supported by the developments of the OpenAIRE project) and repository-based infrastructures (including virtual research communities), and also extend this paradigm to the data repositories. This should be complemented with the development of standards supporting the interoperability with national repository-based e-infrastructures for publications and data, and with global collaborative efforts towards high-quality Open Access data and interoperable systems (as for example supported by COAR, the Confederation of Open Access Repositories).

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