Position Paper on Open Access of Scientific Data in Horizon 2020

The World Wide Web and ICT have created the potentiality to make knowledge available, immediately and everywhere. This immediate availability of knowledge generates high expectations of science among politicians, policy makers and citizens in Europe and the world. As a movement which has started within the scientific field itself, Open Access provides European science policy with a strong bid to meet these expectations.

The importance of Open Access both to research and to the economy at large has risen significantly over the last few years. Due to rapid technological developments, the scale of data sharing and collection has increased spectacularly compared to the first mentioning of Open Access within the Common Strategic Framework in November 2011. We therefore urge the Commission to take these developments fully into account. On the day the Horizon 2020 will be launched, it will be the most important cross-border research and innovation programme in the world. This creates an opportunity to lay down ambitious goals and regulate Open Access for cross-border research and innovation and to exploit its full potential. Information generated by universities will, at the choice of the institutes involved, be available to Open Access publication whenever compatible with other interests and obligations. Therefore the Rules For Participation in Horizon 2020 must promote, clarify and regulate Open Access whenever possible.

The undersigned parties state the following:

- Open Access has the potential to provide all stakeholders with evidence of the high standards of quality and integrity which the scientific system has traditionally imposed on itself. Open Access to research data must be encouraged to combat scientific misconduct and to foster the professionalization of researchers. Also in this Age of Big Data the rich universe of research data could be accessible:

  - to obtain new insight in research processes
  - to stimulate creativity and the discovery of new fields of research
  - to increase transparency of the practice of scientific research and its results in the form of publications and the underlying research data
  - to enhance quality and excellence of research
  - to enhance societal accountability
  - to make innovation possible
  - to widen participation of the latest EU member states.

- We must share the ambition to invest in the transformation of mere input research data into re-usable research data. Therefore funding organisations (EU, Research Councils, Foundations, but also universities) should make data enriching activities (including metadata) eligible for funding under Horizon 2020. Up to now research data have been regarded as single use and specific input factors for research by the data owner. Opening up data can transform data into intermediate products that can be re-used by other researchers and industry.

  Information generated by universities will, at the choice of the institutes involved, be available to Open Access publication whenever compatible with other interests and obligations. The data will be provided for the purpose of perusal by any third

party only. The universities aim to make their data available for Open Access whenever possible according to the slogan 'Open when possible, closed if necessary' at the discretion of the owner of the data/the university.

- We urge the Commission to focus their Open Access policy on:

    o data underlying peer-reviewed publications
    o data which are hard or impossible to reproduce
    o data for which generation was extremely expensive

For all these data we would favour guidelines stating that

    o processed data should be deposited, especially when this increases the usability compared to the raw data (e.g. a larger user community, use possible without extensive pre-processing, etc.)
    o raw data should be deposited when possible but definitely when processing is not done by generally accepted procedures

For sensitive data we encourage the Commission to have similar risk classes for privacy and commercial interest, e.g. from 0 (public domain) to III (very high risk) to ease implementation and communication.

- Reconcile the protection of individual rights to privacy with the needs of scientific research. Take into account the robust ethical framework which is used by scientific research instead of developing new standards and therefore risk creating obstacles to future scientific developments.

- Implementation of data management obligations are needed in the early stages of research. This reduces the additional burden for researchers when meeting requirements for Open Access at the time of submitting a research proposal. Research data management plans can consist of an overview on the general types of data, data products and samples; a brief data description with respect to quantity and locations of data, a data analysis summary; radio buttons with respect to field work and use of existing data.

- Adopting open access calls for improvement and acceleration of the classical investment exploitation direction. Once the data are in the public domain, no royalties can be obtained for them nor can patents be obtained and therefore no exclusivity of exploitation rights can be granted. Such higher speed through an improved decision process is actually beneficial to valorisation through classical investment exploitation, as well. This process can be designed in such a way that it is not a significant hindrance to IP-access for Industry. To achieve all this, the Open Data Policy calls for the speeding up of the commercialisation process of the project IP, which in turn would be an improvement for the valorisation process in the universities and research institutes as such.

- We recommend that the future EU-funding contracts include mandatory clauses according to IP dissemination and exploitation. However note that for the policy to be effective, it is crucial to be highly specific with regard to a patenting-compatible schedule and/or the contribution percentage and company profiles in these mandatory clauses.

- We ask the Commission to create a call for an experiment on open access in a Public Private Partnership construction to fully assess its implication for industry.

- Pilot calls should be thoroughly monitored. Halfway through the Horizon 2020, programme feedback should be collected on researchers' (and other stakeholders') experiences of the implementation of the pilot, the reimbursement of costs of Open Access to scientific data, and the impact of Open Access on the use, re-use, citations of scientific data. Standards and provisions should be set for research data management and re-use of data. These standards and provisions should answer the following questions:

  [1] Which researchers are supposed to deposit data?
  [2] What data to deposit?
  [3] Where to deposit data?
  [4] When to deposit data?

- In order to bridge the innovation divide in Europe, Open Access to data should be actively pursued, as sharing data can foster the advancement of excellent researchers in the EU12, with due respect, however, for the legitimate commercial, national security and privacy interests.

- The Commission should harmonise contradictions in Open Access between ERC and Horizon 2020 and the definitions in use, as the contradictions will result in a variety of approaches and interpretations, which create complexity for the participants. Simplification efforts must remain participant-focused, and should result in a programme that is easily understood and navigated, and cost-effectively administered by both the Commission and participants and laid down in the guidelines for application and in the general agreements.

The undersigned parties are willing to take an active part in Open Access pilots together with the scientific publishing industry and European data infrastructure actors and to act as a sounding board if welcomed by the Commission.

The undersigned parties have a solid infrastructure to share, preserve and archive research data. The existing data centres DANS[1] and 3TU.Datacentrum cover most scientific disciplines and are aligned in Research Data Netherlands.

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[1] Data Archiving and Networked Services

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Delft University of Technology, Erasmus University Rotterdam, Leiden University, University of Twente and Eindhoven University of Technology cooperate in multidisciplinary research that covers all societal challenges as mentioned in Horizon 2020. Research focuses on Energy, Health, Sustainability, Environment, Mobility and Transport in cooperation with industry and other stakeholders. It therefore provides good opportunities to experiment with Open Data and assess its implications for science. All universities work together with like-minded universities around Europe to advocate Open Access and support scientists with their Open Data needs.

We further refer to our support of the League of European Research Universities' (LERU) position paper on open access to research data:
http://www.leru.org/files/publications/Open_Access_to_Research_Data-FINALdocx.pdf