EUA
European University Association

Towards

Open Access to

Research **Data**

Aims and recommendations for university leaders and National Rectors' Conferences on Research Data Management and Text and Data Mining

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As society becomes more digitised, scientific research both utilises and produces progressively more data. This has brought with it a need for sharper focus on data management, and in particular for all data to be more openly and easily accessible. In this context, effective Research Data Management (RDM) processes are essential to enable more transparent and accessible research outcomes. Likewise, Text and Data Mining techniques (TDM) are required if we are to read, access, and analyse such data. As more and more new insights in science are facilitated by comparative analysis of data across different disciplines, TDM is becoming an essential element of the research process. The consequence of these developments is that RDM and TDM together now represent a strategic challenge for universities across Europe. Despite the great prospects for the advancement of knowledge offered by a new open digital research space, there is still much to be done to ensure that research data can be properly managed and for its effective use and re-use to be possible.

This document presents a set of aims and recommendations for university leaders and National Rectors' Conferences to assist them in facilitating effective RDM and TDM in a manner wholly complementary with the [EUA recommendations on open access to research publications](). While the latter is at a more developed stage of implementation across Europe, RDM and TDM are still in an early state of realisation. Levels of awareness among researchers in RDM and TDM are lower generally, and institutional and national policies are few (cf. EUA Survey on Open Access 2016/17[1]). Accordingly, the aims and recommendations contained here are designed to support universities and National Rectors' Conferences in pump-priming the application of RDM and TDM practices as a means to further enhance open access to research data arising from publicly funded research.

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[1]   According to the survey, more than 50% of surveyed institutions did not have institutional policies or guidelines on research data management and seven in ten institutions did not have policies or guidelines on open access to research data. The results of the survey are available [here]().

The European Commission has contributed significantly to promoting sharing of data by the introduction of specific provision in Horizon 2020 for the Open Research Data Pilot. Their goal is to "make all scientific data produced by the Horizon 2020 Programme open by default"[1], while ensuring opt-out provisions where needed. The Open Data Research Pilot in Horizon 2020 has, since the beginning of 2017, been extended to all thematic areas, and it follows the principles of FAIR (findable, accessible, interoperable and reusable) data, by emphasising that data should be "as open as possible, as closed as necessary".

Aims for an open research data system

In Towards Full Open Access in 2020, EUA called for an open scholarly exchange system that achieves three outcomes: 1) Ensure the quality of research outputs which also facilitate researcher career development. 2) Provide capacity and services in an equitable manner which balances the interests of commercial providers and public institutions. 3) Enable research outputs, such as publications and data, to be made openly available and fully reusable through new cultures of sharing and legal frameworks which facilitate open licence approaches.

A first step towards achieving this system of sharing data openly is to remove the obstacles and barriers identified at institutional level (cf. EUA Survey on Open Access 2016/17). Some progress has been achieved with this, in the form of good practice by some juristictions and institutions. However, considerable obstacles remain with the development and implementation of RDM at institutional level in particular. The application of TDM in the institutional research context faces three kinds of challenges: 1) Structural, such as with limitations to current regulations. 2) Technological, such as lack of adequate infrastructure, ambiguous and fragmented standards. 3) Human resource, as with lack of awareness and lack of adequate skills at the level of the institution and that of the researcher.

The ability to re-use and re-analyse research outcomes must be considered an integral part of the basic set of competences required by researchers to conduct successful research. Data stewards and librarians also need to be up-skilled to assist researchers in properly managing, preserving and sharing data, according to clear institutional guidelines.

It is important that the new EU-sponsored European Open Science Cloud (EOSC) be accessible and open to all relevant stakeholders, particularly university researchers and doctoral candidates.

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1   Cf. Communication from the EC 'European Cloud Initiative - Building a competitive data and knowledge economy in Europe'.

In meeting these challenges, EUA proposes the following recommendations to its membership.

Recommendation to University Leaders and National Rectors' Conferences

- **Engage in dialogue** with other relevant national bodies to support the **development of policies and guidelines that facilitate RDM and TDM**. In this respect, it is important to strive for the development of policies that are in line with the EC FAIR data guidelines, ensuring that data should be "as open as possible, as closed as necessary". Policies which support use and re-use of research data that is accessible and open should also be developed in cooperation with other bodies.

- **Take an active role in the policy and legislative developments underway both at EU[3] and national levels**, by working together with national Members of the European Parliament (MEPs) and other relevant bodies such as the European Council. Changes in EU legislation, such as EU Copyright reform, and revision of the EU Database Directive, will significantly impact research activities by setting the main conditions for access, use, sharing and dissemination for years to come. It is therefore critical that NRCs and university leaders are attentive and responsive to legislative developments at EU and national level and that they express their concerns using relevant political and regulatory processes. Advocacy in this regard should emphasise the need for adequate regulation and policy to facilitate access, use, re-use and dissemination of research outcomes. Exceptions should be sought for research and teaching in EU and national level policies and regulations so that research can transition effectively towards Open Access.

- Establish **policies and guidelines for RDM and TDM** which have the following elements:

    - **Raising awareness** at institutional and researcher levels of the importance of RDM and TDM for the advancement of science and knowledge.

    - **Ensuring that ownership of research data remains with researchers and their institutions**, and is not transferred to scientific publishers.

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3   EUA has been actively involved in this process, having expressed its position earlier this year and in tandem with other relevant stakeholders. In September 2017, EUA, together with a range of other organisations, expressed concerns to the JURI committee in the European Parliament over recent developments in the EU Copyright reform which could seriously obstruct the transition towards Open Access and Open Science.

- **Investing in and supporting human resource skills training**: researchers need to acquire the necessary analytical skills to both manage and use RDM and TDM techniques in their own disciplines.

- **Adopting, recognising and rewarding standards and good practices in RDM and data analysis**: acknowledging and incentivising the value of good research data management practices and research data analysis as a normal part of research, research assessment, and career development.

- **Supporting and investing in the development and sustainability of infrastructures and support services** for RDM and TDM at institutional, national and EU-levels.

EUA is committed to supporting its members in their efforts to move towards a more transparent and open research system; we will continue to maintaining close dialogue with the European Commission and engage actively in relevant initiatives in the field of Open Science.

The European University Association (EUA) is the representative organisation of universities and national rectors' conferences in 47 European countries. EUA plays a crucial role in the Bologna Process and in influencing EU policies on higher education, research and innovation. Thanks to its interaction with a range of other European and international organisations EUA ensures that the independent voice of European universities is heard wherever decisions are being taken that will impact their activities.

The Association provides a unique expertise in higher education and research as well as a forum for exchange of ideas and good practice among universities. The results of EUA's work are made available to members and stakeholders through conferences, seminars, website and publications.

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