RESEARCH DATA MANAGEMENT AND SHARING POLICY OF ISCTE-INSTITUTO UNIVERSITÁRIO DE LISBOA

(approved by order of the Rector on 16 November 2023)

In the current research panorama, under constant evolution, the effective management of research data is of extreme importance for higher education institutions. Iscte - Instituto Universitário de Lisboa (Iscte) acknowledges the relevance of research data as a valuable resource sustaining the integrity and quality of its academic activities. In conformity with global best practice and committed to the guiding principles of Open Science of the European Commission and Fundação para a Ciência e a Tecnologia, I.P. (FCT), Iscte fully endeavours to foster a research environment that empowers its academic community to stand out in the generation, preservation and sharing of research data.

This Research Data Management and Sharing Policy reflects Iscte's commitment to research integrity, innovation and social impact, while simultaneously contributing to the global dialogue on the responsible and effective management of research data.

This policy complements the Iscte Open Access Policy and all the other institutional documents, including the Guidelines for Researchers on Personal Data Protection in Scientific Research Activities at Iscte, the Data Protection Policy of Iscte and the Code of Ethical Conduct in Research.[1]

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[1] Iscte Ethics Council website

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Introduction

Brief context

The policy proposed in this document aims to be in line with the various initiatives that have been published by the European Commission, namely the [Recommendation of 2012](#) on access to and preservation of scientific information and its [update in 2018](#).

This document also took into account the Horizon 2020 guidelines on rules of open access to scientific publications; [Regulation (EU) 2021/695](#) of the European Parliament and of the Council establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination, and [Council Decision (EU) 2021/764](#) establishing the specific programme implementing Horizon Europe – the Framework Programme for Research and Innovation.

It also takes into consideration important developments at a European level related to Open Science and Open Access, such as the [EU Council Conclusions of 2016](#) on the transition towards an Open Science system, the ['Plan S' and 'cOAlition S'](#), the developments of the [European Open Science Cloud](#) (EOSC) and in particular the Strategic Research and Innovation Agenda, the action lines of the [EU Open Science Policy](#), the Resolution on "[A new ERA for Research and Innovation](#)" and [EU Directive 2019 on open data and the reuse of public-sector information](#) and the Report "[Towards a 2030 Vision on the Future of Universities in Europe](#)".

Finally, it considers other relevant reports such as: "[Perspectives on the new European Research Area from the university sector](#)", "[Universities without walls: A vision for 2030](#)" of the European University Association, "[Looking to the Future: the Guild's Vision for Europe's Universities](#)" of The Guild of European Research-Intensive Universities, and Science Europe's practical guide "[International Alignment of Research Data Management](#)."

Benefits and advantages of Open Science

Open Science is a scientific activity conducted in an open, collaborative and transparent manner, in all fields of knowledge, from the basic sciences to the social sciences and humanities.[2,3] It has the potential to increase the quality and efficiency of research and fast-track the advancement of knowledge and innovation through the sharing of results, making them more reusable and improving their reproducibility. It is based on the following principles:

- transparency in practices, methodology, observation and data collection;

- the provision, public access, reuse and replicability of research results and methods;

- transparency in scientific communication;

- the use of web-based tools to facilitate scientific collaboration.

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[2] Eloy Rodrigues (2022) in the Session dedicated to Open Science at the 25th anniversary of FCT. Available at: https://www.youtube.com/watch?v=P0Rpcjk79BI&t=1172s
[3] UNESCO Recommendation on Open Science. Available at: https://unesdoc.unesco.org/ark:/48223/pf0000379949_por

Requirements of the funders

The table below lists the main requirements of the Horizon Europe framework programme:[4]

Requirements	Horizon Europe
Compliance with the FAIR principles	Yes
Compliance with the principle of "as open as possible, as closed as necessary"	Yes
Submission of a Research Data Management Plan (DMP)	Beneficiaries should submit the first version of their DMP, as a deliverable, within six months after the official project starting date. This deliverable should be updated half-way through the project (for projects with more than 12 months of duration) and at the end of the project, if relevant.
Measures to ensure the reproducibility of the results of the funded research	The beneficiaries should provide information, through the repository, about other research results / tools / instruments required for the reuse and validation of the data.
Open access to the research results through their deposit in trusted repositories	As soon as possible, and within the time limits established in the DMP, the data should be deposited in a trusted repository (that is EOSC federated, for example Zenodo).
Persistent identifiers and licences	The beneficiaries should take steps to allocate persistent identifiers to the research results. Open access should be ensured through a Creative Commons Attribution International Public Licence (CC BY), waiver of copyright (CC0) license or equivalent.

Fundação para a Ciência e a Tecnologia, I.P. (FCT), through the POLEN project[5] developed by the FCT National Scientific Computing Unit (FCCN), aims to meet the needs of the scientific community in the area of Research Data Management. It seeks to promote the principles and practice of Open Science, ensuring the sharing and preservation of the research data generated within publicly funded projects.

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[4] Grant Agreement of Horizon Europa (p. 285): https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf
[5] POLEN project: https://polen.fccn.pt/

Principles

1. Iscte-Instituto Universitário de Lisboa is committed to promoting science and the dissemination of knowledge for the benefit of society, adopting research practices that are open, reproducible, and responsible.

2. It encourages and supports the use of processes and tools that boost collaboration, promoting the dissemination of knowledge and the accessibility and reuse of research results.

3. It enables data and research management in conformity with the FAIR principles,[6] ensuring that the research data are findable, accessible, interoperable, and reusable.

4. It ensures the research data's availability under open access, with possible duly justified exceptions, in accordance with the principle of as open as possible, as closed as necessary.

Scope

1. This policy is applicable to all research data generated or managed under research projects and activities pursued on behalf of Iscte-Instituto Universitário de Lisboa. In cases where the research is funded by third parties, any agreement with that third party on rights of access, deposit or storage takes precedence over this policy.

Requirements

Iscte-Instituto Universitário de Lisboa:

1. Requires the deposit, within the Zenodo repository Iscte community,[7] of the necessary research data for the validation of the scientific research results produced at Iscte. The data should not only be accompanied by persistent identifiers (for example, Digital Object Identifier (DOI), Open Researcher and Contributor Identification (ORCID ID)), but must also be related to the publications and other outputs whenever possible (through DOI and/or Handle).[8]

2. Requires that the research data be managed in accordance with the FAIR principles, ensuring that they are findable, accessible, interoperable, and reusable.

3. Requires the research data's availability under open access, with possible duly justified exceptions, in accordance with the principle of as open as possible, as closed as necessary. If the access to the data is not open, due to constraints of legal nature, privacy or other, the legitimate reasons justifying the restricted access should be described in the Data Management Plan. In any case, the metadata that ensure the data's location must be provided.

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[6] FAIR principles: https://force11.org/info/the-fair-data-principles/
[7] Iscte community for deposit of research data in Zenodo: https://zenodo.org/communities/iscte/
[8] If duly justified, the data may be deposited in other trusted repository, thematic, in which case the DOI and/or access link to the metadata should be sent to the Research Support Office so that the record can subsequently be added to the Iscte Research Data Catalogue.

4. Requires the availability of anonymous or anonymised research data, whenever the envisaged purposes of the research may be achieved in that form or, where it is necessary to make data of personal nature available, their provision in conformity with the General Data Protection Regulation and following the Guidelines for Researchers[9] on Personal Data Protection in Scientific Research Activities at Iscte.

5. Requires the submission of the Data Management Plan[10] within six months after the project starting date, on the respective Ciência-IUL project page, ensuring that the final version is up-to-date.

6. Requires the research data to be accompanied by all the necessary metadata for its reuse and validation. If applicable, information should be provided on the tools and instruments required for their reuse and validation (and, whenever possible, the actual tools and instruments should be provided).

7. Requires the definition of the rights of use of the research data through assignment of the appropriate licenses – CC BY or CC0 – or equivalent licenses.[11]

8. Requires the research data's storage and processing in a secure environment, preferably using the institutional infrastructures,[12] in order to prevent losses and unauthorised alterations, ensuring confidentiality whenever necessary.

9. Requires the preservation, for a period of 10 years after the project's completion, after the publication or public presentation of the research work, of the research data required for the validation of the research results or considered of value to the researcher or scientific community. However, the specifications of the funder, publisher, patent, legal requirements or other regulatory requirements should be fulfilled.

10. Requires the elimination or destruction of the research data in accordance with the legal and ethical requirements with special attention paid to their confidentiality and security.

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[9] Guidelines for Researchers on Personal Data Protection in Scientific Research Activities at Iscte: https://www.iscte-iul.pt/assets/files/2022/12/12/1670862287212_guidelines_for_researchers_on_personal_data_protection.pdf
[10] Iscte-Instituto Universitário de Lisboa recommends the use of the ARGOS tool for the development of the Data Management Plan: https://argos.openaire.eu/home
[11] https://dmeg.cessda.eu/Data-Management-Expert-Guide/6.-Archive-Publish/Publishing-with-CESSDA-archives/Licensing-your-data
[12] IT and Communication Infrastructure Services (SIIC) Research Support: https://siic.iscte-iul.pt/servicos/apoio-a-investigacao/

Liabilities

Iscte-Instituto Universitário de Lisboa is responsible for:

- Defining, updating, and disseminating the research data management and sharing policy.

- Providing, by its own, shared or externally hired means, the necessary infrastructures and services for compliance with this policy's requirements and the funder's requirements, namely storage and backup solutions, a trusted data repository and system for data management plans.

- Providing the institution's members with training, support and advice on research data management.

- Ensuring the necessary resources (human, technological and financial) for the services supporting research data management.

Iscte's researchers are responsible for:

- <u>Principal investigators</u>: processing the personal data in conformity with Iscte's rules and instructions on this issue, and for ensuring that all the research team's members have the necessary skills for effective research data management.

- <u>All the researchers</u>: gaining skills and applying good practice concerning research data management.

- <u>Supervisors/mentors</u> of master's and doctoral students and postdoctoral researchers: processing personal data in conformity with Iscte's rules and instructions on this issue, and guiding them on how to plan, manage and share research data.

- Managing the data in accordance with the FAIR principles, the policies and requirements of the institution and/or funders.

- Designing, submitting and updating the Data Management Plan (DMP), in order to comply with the requirements of the institution and/or funders.

- Collecting research data in an anonymous form whenever the envisaged purposes may be achieved in that form, avoiding the processing of personal data.

- Whenever it is necessary to process personal data, for ensuring compliance with the General Data Protection Regulation (GDPR) and complying with the Guidelines for Researchers[13] on Personal Data Protection in Scientific Research Activities at Iscte, ensuring the principle of data minimisation, all other personal data protection principles, and taking the corresponding technical and organisational measures, including, among others, the anonymisation of personal data as soon as possible or, in the event that the anonymisation compromises the envisaged purposes of the research, the pseudonymisation of personal data.

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[13] Guidelines for Researchers on Personal Data Protection in Scientific Research Activities at Iscte: https://www.iscte-iul.pt/assets/files/2022/12/12/1670862287212_guidelines_for_researchers_on_personal_data_protection.pdf

- Depositing the research data in the repository required by the institution, by the research completion time.

- Budgeting the research data management costs (costs related to storage, processing and preservation) in project financial planning, and allocating the necessary work time to accomplish those tasks (optional).

- Ensuring the preservation of and access to the collected or generated data, as well as the documentation required for their reuse and validation (unless alternative provisions have been made in this respect in a contract with third parties) pursuant to the defined institutional policy.

The support services are responsible for:

- Providing and managing the necessary infrastructures and services for compliance with the policy requirements of the institution and/or funders (namely, storage, backup, repository, etc.).

- Ensuring access to capacity-building and training on topics related to research data management.

- Supporting compliance with the research data management and sharing policies of the institution/funders.

- Supporting compliance with the General Data Protection Regulation (GDPR).

- Supporting project financing planning with respect to the costs associated with research data management (costs related to storage, processing and preservation).

The research units are responsible for:

- Implementing the research data management and sharing policy defined by the institution, adapting and specifying it according to the Research Unit's context.

- Supporting the researchers in compliance with the requirements of the institution and/or funders.

- Confirming the availability of the research projects' Data Management Plan on the respective Ciência-IUL page, within six months after the project starting date, ensuring that the final version is up-to-date.

- Promoting Open Science practices through incentives and/or success cases.

- Disseminating capacity-building and training actions on topics related to research data management.

Master's and doctoral students and postdoctoral researchers, with the proper support of their supervisors and/or mentors, are responsible for:

- Complying with the guidelines on planning, management and sharing of research data, conveyed by their supervisors and/or mentors of the institution.

- Managing and maintaining the researched data, whether created or reused, in accordance with the institution's policies, regulations, ethical codes and guidelines.

- Contributing to the drafting and updating of the Data Management Plan of the research project in which they participate, in accordance with the guidelines of the institution and/or funders.

- Complying with the procedures for research data collection, storage and security, pursuant to good practice concerning research data management.

- Ensuring the deposit of relevant research data in the repository required by the institution, by the research completion time.

Adoption, implementation, evaluation

This policy enters into force from the date of its disclosure and shall be updated whenever necessary to ensure convergence with best practice and initiatives in the sphere of Open Science and Research Data Management.

Glossary

Research data

Quantitative information or qualitative statements collected by researchers during their work, through experimentation, observation, modelling, interview, or other methods.

The data can be classified as:

- "raw" or primary (for example, directly derived from measurement or collection);
- derived from primary data for subsequent analysis or interpretation (for example, revised data or as an extract of a larger dataset);
- derived from existing sources where the rights may be held by others.

Research data management

Describes the organisation, storage, preservation and sharing of data collected and used in a research project. This involves the daily management of research data over the lifetime of a research project. It also covers decisions about how the data will be preserved and shared after the project's completion (for example, on depositing the data in a repository for long-term preservation and access).

Principal investigator

Researcher responsible for a given research, group, or team leader, who is supervising a research project.

Metadata

Information that describes significant aspects of a dataset. Some examples include: authors, title, publication date, unique identifier, a description of the content of the dataset and license. Metadata provide other researchers with the necessary information to understand and reuse the dataset, and to make the dataset more accessible and findable.

Data management plan (DMP)

Plan that describes how the research data will be managed, during their life cycle. This plan covers various areas, from the strategy for data collection, backup and storage, ethical/legal requirements related to the data, sharing and preservation of data.

FAIR principles

Series of guiding principles to ensure that the data is findable, accessible, interoperable, and reusable. FORCE11[14] is the organisation that defined these principles and provides an explanation on their exact meaning and implementation.

Data repository

Corresponds to platforms that enable aggregating, storing, preserving, and managing research datasets. The depositing of data in repositories for this purpose increases their visibility and the opportunities of collaboration within the scientific community. In being stored, preserved and made accessible, the research data can contribute to the reproducibility and dissemination of science, and to their validation.

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[14] FAIR principles: https://www.force11.org/group/fairgroup/fairprinciples

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