Implementation of the CoreTrustSeal

The CoreTrustSeal board hereby confirms that the Trusted Digital repository ADP - Social Science Data Archives complies with the guidelines version 2017-2019 set by the CoreTrustSeal Board.
The afore-mentioned repository has therefore acquired the CoreTrustSeal of 2016 on January 23, 2018.

The Trusted Digital repository is allowed to place an image of the CoreTrustSeal logo corresponding to the guidelines version date on their website. This image must link to this file which is hosted on the CoreTrustSeal website.

Yours sincerely,

The CoreTrustSeal Board

Assessment Information

Guidelines Version:	2017-2019 | November 10, 2016
Guidelines Information Booklet:	DSA-booklet_2017-2019.pdf
All Guidelines Documentation:	Documentation
Repository:	ADP - Social Science Data Archives
Seal Acquiry Date:	Jan. 23, 2018
For the latest version of the awarded DSA for this repository please visit our website:	http://assessment.coretrustseal.org/seals/
Previously Acquired Seals:	None
This repository is owned by:	**Univerza v Ljubljani, Fakulteta za družbene vede, ADP - Social Science Data Archives Kardeljeva** ploš?ad Ljubljana Slovenia T 0038615805292 F 00386015805294 E arhiv.podatkov@fdv.uni-lj.si W http://www.adp.fdv.uni-lj.si/

Assessment

0. Context

Applicant Entry

Self-assessment statement:

Slovenian Social Science Data Archives (ADP) is a national research infrastructure for social sciences, whose main mission is to manage data and data-connected services in order to support research, education, and general well-being. The ADP performs data-level curation, since, besides brief checking, the addition of basic metadata and/or documentation, the creation of new formats, enhancement of documentation, it edits the deposited data for accuracy as well.

The ADP's designated community consists of national and foreign researchers, teachers and students, who have the knowledge of data handling and are statistically literate for independent understanding and analyzing of materials. It is also expected that the users of qualitative data are familiar with the basics of qualitative methodology and that they understand the context of qualitative research design (a more detailed description of our designated community can be found on our webpage).

By organizing training for users and by stimulating knowledge exchanges, the ADP actively promotes the secondary use of data amongst its designated communities. Journalists, policymakers, and ordinary citizens are considered to be part of the broader public if they express the desire to legitimately use the data and accept the rules and restrictions of working with secondary data.

ADP adapts access to data, metadata, and other data services to its various target users (see section on Access on the webpage of the ADP).

The ADP cooperates with various external service providers. Cooperation with ARNES takes place on the level of management of the network infrastructure, used by the ADP. The ADP cooperates also with the National and University Library (NUK) and other external service providers (maintenance of servers and IT support, programming services). Written agreements on cooperation, which are regularly updated, determine the cooperations with individual outsource partners (validity, scope, reporting, financial arrangements).

Besides its main mission to provide services for its designated communities in the national environment, the ADP is actively involved in a broader national and international research infrastructure. As a data service provider, it actively follows international development initiatives from its discipline (OECD, academic unions, research

policies from developed EU countries, the USA and Australia) and promotes their implementation into the national environment. The staff of the ADP is involved in different working groups as external experts, preparing drafts or giving advice on the formation of strategic documents and guidelines. Initiatives, guidelines, and demands of national and international organizations and science funders are promoted in the national research community by organizing workshops, roundtables, and seminars, intended for various participants of the scientific research community (researchers, heads of institutions, publishers, libraries etc.).

Due to the interdisciplinary nature of research data holdings of the ADP, the ADP is of importance to users from other scientific fields as well as other infrastructure networks. The content of research data holdings and possibilities of reuse are broad, for example in kinesiology, psychology, geography, history, medicine etc.

On the national level, the ADP connects with other national disciplinary infrastructures, dealing with research data management internationally. ADP works most closely with the national representatives of Digital Research Infrastructure for the Arts and Humanities – DARIAH (Institute of Contemporary History – SiStory and affiliated research infrastructure ZRC SAZU) and Common Language Resources and Technology Infrastructure - CLARIN (Institute Jožef Stefan), exchanging experiences, good practices, interdisciplinary exchange of data and discussing the possibilities to develop interconnected infrastructure services on the national level.

The inclusion of the ADP in the activities of the Pan-European research infrastructure – CESSDA ERIC (Consortium of European Social Science Data Archives) lies in the forefront of the international cooperation of the ADP. Under the authority of the Ministry of Education, Science, and Sports, the ADP acts as a national service provider of CESSDA. CESSDA is based on mutual expert and organizational support and aims to provide integrated and sustainable data services to the social sciences. Membership in CESSDA enables professional exchange and cooperation. On the other hand, it means several responsibilities, which national service providers, such as the ADP, need to fulfill. One of the CESSDA activities of the ADP is also working on shared project applications within the EU Framework Programme for Research and Innovation Horizon 2020.

In addition to the above, the ADP cooperates in different international initiatives. Amongst the groups, with which ADP forms professional ties and organizes exchanges of data, are Interuniversity Consortium for Political and Social Research (ICPSR), Research Data Alliance (RDA), Knowledge Exchange, International Federation of Data Organisations (IFDO), Committee on Data for Science and Technology (CODATA) etc.

For more on the context of the ADP, see the document Digital Preservation Policy (2017), Chapter 1.

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

1. Mission/Scope

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

The mission of digital preservation of the ADP is to ensure and promote sustainable services of ingest, storage and access to research data of sufficient quality with potential for secondary analysis from the field of Slovenian social sciences and broader.

The mission of ADP, as defined by the Rules on Organization and Functioning of the Faculty of Social Sciences of the University of Ljubljana (2017) (available only internally) is, »that it preserves original data from social sciences studies, conducted within the faculty, which all researchers from the faculty are obliged to deposit, including original materials, and all other social sciences studies that are important for the social sciences«. The functioning of ADP is thus clearly directed towards assuring access to and preserving data from the field of Slovenian social sciences. Within its mission, the ADP establishes itself as a national infrastructure that collects important data sources from a wide range of social sciences, interesting for the analyses of the Slovenian society, deposits, preserves and promotes their further use in scientific, educational and other purposes.

Main functions of the disciplinary data service provider ADP are:

- Acquiring important research data from a wide range of social sciences, interesting for the study of the Slovenian society.

- Appraisal of submitted research data and their selection for deposit. Research data from scientifically important studies that reach theoretical and methodological excellence have precedence, especially longitudinal and internationally comparable data that include data from Slovenia. Investments in dealing with research data must be proportional to their value and benefits of further usage.

- Ingesting and processing research data and other documentation, together with creating metadata with the goal to prepare a package for long-term digital preservation (AIP) and preparing for access and further use for scientific, educational and other purposes (DIP).

- Long-term digital preservation.

- Providing access to research data that enables easy and well-informed usage for various purposes.

- Training researchers on planning, dealing and preparing data for ingest in open access.

- Actively promoting the secondary use of research data through training of users and stimulating exchanges of knowledge amongst users.

For more on the context of the ADP, see the document Digital Preservation Policy (2017), Chapter 2.

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

2. Licenses

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

Functioning of the ADP in the Slovenian research environment is subjected to certain rules of exchange and use of knowledge and information. The functioning needs to be in line with the legal framework, defining the area of access and use of digital objects. It is of vital importance that the ADP informs its users on the contents of the relevant legal framework and that it performs monitoring of this fulfillment with the existing rules. For a list of relevant legislation that the ADP is monitoring and implementing in its licenses see the document Digital Preservation Policy, Chapter 2.2 or see the section Legal, Ethical Norms on webpage).

In terms of rules of ingest and rules of accessing materials and research data, the ADP uses fixed forms that are available on the webpage of the ADP. Ingest of research data is accompanied by materials, such as documentation on the fulfilment of ethical standards, legal frameworks and good practices. The archive and the data provider sign an agreement in the form of a License agreement. All information on rights and conditions of access are written in the administrative metadata, which regulates the further processes of storage and allowances of access. By signing the agreement, the data providers affirm to have rights to deal with the research data, assure that care was made to enable confidentiality of personal data, and define licenses, under which the research data and additional documentation can be distributed to users. The data provider can also define possible exceptions concerning access. If not, the research data and other documentation are accessible to users under Creative Commons 4.0 licenses (see Chapter 3.5.1 in the document Digital Preservation Policy, and section on Access on the webpage).

The ADP uses the following licenses: CC0 – without restrictions, CCBY – attribution alone, CCBYNC – attribution + non-commercial (see the document Digital Preservation Policy, Chapter 3.5 and the section on Access on Webpage). Final responsibility for thorough use of research data that takes into consideration ethical principles of confidentiality, copyright, and academic honesty lies on the user of research data. When accessing research data users are warned to carefully respect the principle of ethical reuse of data (see General Provisions and Terms of Access). Users can inform themselves on specific conditions of reuse in the study descriptions (see an example). By registering at the ADP the users oblige themselves to respect professional and disciplinary ethical standards, as well as ethical and legislative restrictions on the reuse of data, especially clauses relating to confidentiality. Users can use research data only for the purposes expressed at the point of registration.

Access to most microdata in the catalog of ADP is openly available to users, however, a registration is needed on the webpage of ADP. In the case when microdata is sensitive or unprotected, they are accessible only to a limited

range of users. Possible types of access are two: access of portable medias or access in a secure environment (office of ADP) (for more information see the section on Access on webpage or read in the Digital Preservation Policy, Chapter 3.5).

Protection of confidentiality can be managed with different restrictions of access to microdata, depending on the level of protection of microdata and the type of the user. If needed, the data provider, with the support of the ADP, prepares different versions of the microdata with different levels of protection for different levels of access.

The sanctioning of improper use of ADP's holdings has not been necessary so far. In the future, ADP will, if needed, develop a system for monitoring and a procedure in case of sanctioning the improper use of data files, in accordance with ethical codes of conduct and active inclusion of ethical commissions.

For more on the preservation plan of the ADP, see the document Digital Preservation Policy (Chapters 2.2, 3.2.1 and 3.5.1).

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

3. Continuity of access

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

3. In progress: We are in the implementation phase.

Self-assessment statement:

The Rules on Organization and Implementation of the Research Activities of the Faculty of Social Sciences of the University of Ljubljana (2017) (available only internally) determine official obligation of the Faculty to "the continuity of preserving and providing access to research data, preserved by the ADP by creating appropriate organizational and financial conditions for its functioning. This is and will continue to be done by acquiring public funds from the Slovenian Research Agency to support the infrastructural research programme of archiving. The Faculty aspires to preserve these financial flows. In case the ADP will cease to function, the Faculty will, together with the ADP, organize and prepare a plan of transferring data to an external institution that will responsibly and appropriately assure the archiving of the data, or to another organizational unit, under the condition that it will have assured external funding".

Concerning the continuity of access, the ADP assures that appropriate local equipment and procedures for long-term digital storage are implemented (see section on Preservation Strategy on the webpage). For these reasons existing tools and services of a backup security duplication in the national environment are used. See the details of transferring backup copies to ARNES and NUK in the document Digital Preservation Policy, Chapter 4.

The ADP aspires to practice the policy of open access that determines that the service in the framework of open access to research data for final users is free of charge. In extreme cases when funding of ADP would be reduced, ADP could start charging users part of data access services that are in the current system free.

In the preparation of a plan of possible transfer and succession of digital preservation services of research data of the ADP (cases of situational insecurity), there are possibilities of cooperation and usage of infrastructural capacities in the National and University Library (more on this can be read in the document Digital Preservation Policy (Chapter 2.3 and 2.6.1).

The duplication of preservation and access services may be in the future organized on the level of CESSDA (example Data-Pass in the USA). This solution is mentioned as a recommendation in the project report of DASISH (DASISH 2015).

For more information see the document Digital Preservation Policy (Chapter 2.3 and 2.6.1) and the section Organizational Infrastructure on the webpage of the ADP.

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

4. Confidentiality/Ethics

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

In the social sciences, it is often the case that researchers deal with personal or other sensitive data and therefore need to be especially attentive to protect the confidentiality of their research subjects. In addition to following the rules set in The Law on Personal Data Protection Act, ADP takes into consideration relevant codes of ethics of the social sciences research community. Relevant (disciplinary) codes of ethics are:

- Code of Ethics of the University of Ljubljana,
- European Code of Conduct of Research Integrity,
- Code of Professional Ethics of the Slovene Sociological Society,
- Declaration of Code of Professional Ethics of the Slovene Statistical Society.

For every study, deposited in the catalog ADP, the ADP inspects before ingest whether or not it applies to above mentioned ethical norms. This means that the data depositor needs to assure that all participants of the studies are protected against unnecessary damage, that they were notified and they accepted the collaboration and that the study fulfills all disciplinary methodological standards.

The protection of research data is primarily the task of the data provider, wherein ADP may only give support. Researchers may ask the ADP for guidance in the process of dealing with research data, including the field of protection of confidentiality and protection of research data. The ADP may in extreme cases independently perform the protection of research data, following fixed procedures, however only in cases, where the data provider explicitly demands such intervention. The liability for proper protection of confidentiality is on the side of the data provider and does not transfer to the ADP, regardless of who has made the protection of the research data.

A Commission for the Protection of Confidentiality is an internal body of the ADP. The Commission meets in cases when at the initial inspection of the study a need for further protection of the research data is identified. The Commission has otherwise two main responsibilities: (1) to make decisions on the protection of submitted data before distribution, (2) to deal with applications for researchers to access less protected or unprotected microdata.

The ADP performs the protection of confidentiality in two ways, that is the anonimisation of research data and by managing access to various types of data for various types of users. The data provider prepares all the different versions of microdata with the support of the ADP, who have different levels of protection for different levels of access.

For more information on anonymization of data and allowing access to various kinds of protected data files see the document Digital Preservation Policy (Chapters 3.2.2 and 3.5.2), the Digital management section on the webpage, Read the Terms of Use section, Understand Descriptions in the Catalogue section, and Prepare Data section on the webpage of the ADP.

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

5. Organizational infrastructure

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

The ADP is an organizational unit of the Social Sciences Research Institute (IDV) of the Faculty of Social Sciences, University of Ljubljana (this status is officially recognized in the Rules on Organization and Functioning of the Faculty of Social Sciences of the University of Ljubljana (2017) and in the Rules on Organization and Implementation of the Research Activities of the Faculty of Social Sciences of the University of Ljubljana (2017) – both documents are available only internally). Act on the Establishment of ADP (1997) defines the main activities of the archive as »collecting, documenting and disseminating original data from social sciences studies, and connecting with similar institutions in national and international merit« (see About ADP on the webpage).

The long-term national importance of ADP is clear in the ongoing support of the ministry, which from the establishment of ADP onwards ensures funding for its functioning. The Republic of Slovenia has accepted the obligation of the membership in the international infrastructural unit CESSDA ERIC to assure sustainability of services for the social sciences national data provider and appointed ADP to be the organization to assure these nationally and internationally connected services, arising from membership in CESSDA. Since 2004, the Ministry of Education, Science and Sports assure the implementation of these obligations by providing national financing of the infrastructural research program CESSDA (as defined in the Research Infrastructure Roadmap 2011 – 2020. Revision 2016, which serves as a strategic basis for the existence of a long-term financial plan by the Slovenian Research Agency) performed by ADP within the infrastructure program Network of research infrastructure centers at the University of Ljubljana (MRIC UL) that is extended every 5 years. The current program period of ADP funding is 2015 to 2020. By naming the ADP to be the national data service provider, the Ministry has directly assured the sustainability of the ADP's functioning, which is one of the core elements of trustworthy data repositories.

The Government of the Republic of Slovenia accepted in 2015 the National Strategy of Open Access to Scientific Publications and Research Data in Slovenia 2015 – 2020 (Government of the Republic of Slovenia 2015) that contains a clause to assure appropriate sustainable financing of national infrastructure of open access to scientific information in the form of publications and research data, composited of people, organizations, equipment (hardware and software) and content: »Sustainability of the national open access infrastructure can only be ensured through continuous public funding, which enables the use of international standards for the creation, publication, dissemination, use, processing, preservation and archiving of scientific information, the education of all stakeholders and the notification of the national and international public on the availability and the ways of using the services and information via the national open access infrastructure. Openly accessible scientific information in the form of publications and research data has to be securely preserved to prevent loss, damage, and misuse. «

Advanced research policies of open access to scientific results anticipate sustainable functioning of the disciplinary data infrastructure services, such as ADP. Such research infrastructure is based on the cooperation of different actors, including fulfilling the policies of funders, the needs of the scientific communities and other target users. For a national social science data service, such as the ADP, it is of a vital importance to be able to function continuously in order to fulfill its mission and functions.

The ADP assures transparency of its operation by responding to the needs of its users. Using diverse ways of promoting its activities, it informs the public on its mission, resources, and services, for examples of workshops, conferences, meetings. The ADP reports regularly on its activities to the Council of ADP, consisting of honorable social sciences' researchers. On an annual basis, it reports also to the Slovenian Research Agency that funds the infrastructure research program of the University of Ljubljana (MRIC UL).

Despite the smallness of the organization, the ADP has sufficient staff to undisturbedly and efficiently fulfill its mission and working tasks. Currently, the staff of the ADP consists of 7 full-time employees, 1 part-time employee and 2 occasional staff members (see section Contact on the webpage). The responsibilities of individual staff members are the following:

- Janez Štebe: Head of Organization, full-time.
- Irena Vipavc Brvar: Director of Administration, full-time.
- Sonja Bezjak: Head of Trainings and Promotion, Head of Acquisition and Ingest, full-time.
- Brigita Bo?kaj: Head of Access and Use, Data Archivist, full-time.
- Irena Bolko: Data Archivist, full-time.

- Maja Dolinar: Head of Digital Preservation, full-time.

- Sergeja Masten: Data Archivist, full-time.

- Ana Pavliši?: System Administrator, part-time.

For a detailed description of each role, see Chapter 2.7 Roles and Responsibilities in the document Digital Preservation Policy.

The staff of ADP is included in on-going training and projects on the national and international level (CESSDA), with which appropriate knowledge and professional experiences from the field of digital data storage and data management practices that follow current international standards and practices are assured. Each year the ADP prepares an annual plan of training of its staff, where, according to the needs, a plan of professional education and development of employees is made.

The staff of the ADP needs to reach certain requirements for needed knowledge and qualifications to be able to work in the archive. The defined knowledge and qualifications are the basis for new staff acquisition as well as the basis for the organization of additional training of the staff. The staff of the ADP needs to measure up to the following qualifications:

- knowledge of digital preservation in general,

- expertise in specific formats,

- basic (or advanced) IT and statistical qualifications (depending on the work role),

- communication and organizational skills for cooperation between internal functional entities and between external bodies and individuals from which/whom objects are received, as well as users and external service providers,

- organizational and management skills for overall planning (strategy, resources) and the coordination of the different functional entities.

For more see the document Digital Preservation Policy (Chapters 2.3 and 2.7) and the section Internal Development on the webpage.

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

6. Expert guidance

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

The ADP is actively involved in a broader national and international research infrastructure. As a data service provider for the social sciences, it actively follows international development initiatives from its discipline (OECD, academic unions, research policies from developed EU countries, USA and Australia) and aspires to reasonably introduce them into the national environment. The staff of the ADP is involved in different working groups as external experts, preparing drafts or giving advice on the formation of strategic documents and guidelines. Initiatives, guidelines, and demands of national and international organizations and science funders are promoted in the national research community by organizing workshops, roundtables, and seminars, intended for various participants of the scientific research community (researchers, heads of institutions, publishers, libraries etc.).

On the national level, the ADP cooperates with other national disciplinary infrastructures, dealing with research data management internationally. ADP works most closely with the national representatives of Digital Research Infrastructure for the Arts and Humanities – DARIAH (Institute of Contemporary History – SiStory and affiliated research infrastructure ZRC SAZU) and Common Language Resources and Technology Infrastructure - CLARIN (Institute Jožef Stefan), exchanging experiences, good practices, interdisciplinary exchange of data and discussing the possibilities to develop interconnected infrastructure services on the national level.

Membership in the CESSDA enables professional exchange and cooperation on the European level. In addition to the above, the ADP cooperates in different international initiatives of publishing and citing research data. Amongst the groups, with which ADP forms professional ties and organizes exchanges of data, are Interuniversity Consortium for Political and Social Research (ICPSR), Research Data Alliance (RDA), Knowledge Exchange, International Federation of Data Organisations (IFDO), Committee on Data for Science and Technology (CODATA) etc.

In its annual report, submitted to the Ministry of Education, Science and Sports (Slovenian Research Agency) and internally to the Council of the ADP, consisting of honorable social sciences researchers, the ADP reports on its activities. One of the challenges in the future is to adapt the structure of the Council in a way to enable more sharing of the expert knowledge from different fields in order to achieve more benefits from various social sciences' disciplines.

The ADP cooperates with certain external service providers, who are experts in their respective fields, such as the network infrastructure ARNES, the National, and University Library (NUK), IT and programming experts.

The ADP communicates with its designated communities for regular feedback on its services. The ADP adapts access to data, metadata, and other services, connected to data, to its various target users, so as to separately display and conduct adjusted services that will fulfill the needs of different segments of users. ADP regularly performs quality evaluations of its services (including surveys of users' satisfaction), taking into account internationally comparable criteria of the quality of service. Based on these evaluations it forms and adapts its services to different users' needs.

ADP prepares different workshops for its designated community. In order to approach the needs of users as tightly as possible, the ADP asks the users at the point of registration for a workshop to provide information on their educational background, about their existing knowledge (on data, statistics etc.) and on intended data use. On this basis, the ADP adapts individual workshop to the group of participants (the theme and the degree of complexity). After the workshops, the ADP invites participants to fill in a survey of their satisfaction with the workshop. Such feedback is important for future plans of working with designated communities. Currently, the ADP is preparing a thematic manual on how to use data in teaching together with teachers and professors in order to approach the needs of users even further.

For more see the document Digital Preservation Policy (Chapters 1.3, 1.2 and 2.7.4).

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

7. Data integrity and authenticity

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

The ADP in its long-term digital preservation mission aims to follow closely also the principles of preserving data integrity (ensuring that the archived data are protected against unauthorized alteration) and preserving authenticity (ensuring that the digital objects come from a documented originator and that they are what they purport to be). Maintaining data integrity and authenticity are considered a mindset of the organization and the responsibility of everyone within the repository (see section Preservation Strategy on the webpage).

At the point of ingest, the received materials are subjected to thorough examination, where the focus is put on the completeness of the documentation, substantive importance of the study, examination of the anonymization of the materials and accordance of the submitted data formats with the recommended formats. The entire workflow of the study is strictly defined, according to a fixed procedure. ADP's internal documentation describes ingest and processing of studies, as well as the type of data and metadata that are created during this procedure. For each data set, an AIP (archival information package) is created, containing data and metadata. Usually, the AIP is also the DIP (dissemination information package), but sometimes (due to embargo or data protection issues) there might be several versions of both AIP and DIP, depending on access rights (ScUF, SUF and PUF files).

All changes made by the ADP to a SIP (submission information package) to create an AIP (for all the materials) are documented by the ADP staff in JIRA (software used to note down the state and changes of individual studies). Complete information about each dataset and metadata file, as well as changelogs and additional administrative metadata, are stored in this application, while at the same time some information is also stored with the AIP metadata (in Codebook). Data are given a version number, and the new changes to create a different version are described in details. Metadata files are versioned as well. Additionally, a history log is maintained in the application.

The internal handbook contains step-by-step instructions on versioning. Versions and revisions are used, depending on how big the change in the file is. The ADP developed a system of monitoring changes that enable traceability of the transformation of digital objects. Two types of changes are possible: smaller changes, which are run as revisions, and larger transformations of objects, which are run as versions. The revision and version of the document are visible in the document name.

All materials, regardless of their revisions or versions, are stored in a common directory, their security copies are held at various location (see the document Digital Preservation Policy (2017) - Chapter 4.2).

Changes are most carefully noted down at the level of data files so that in each step it is possible to trace them and get to the original version of the data file. The changes in the study descriptions, data files, and additional materials are noted down with versioning in naming individual files. The explication of the changes is written down in JIRA. For data files, all changes are noted also in the SPSS syntax. By default, access is given only to the most recent version of the files. For earlier versions, the users need to contact the ADP staff and apply for access.

Changes are noted down also in internal documents. This is done in a way that the name of the documents is given a version and a revision. When smaller changes are made, a new revision of the document emerges, when a bigger change is made, a new version of the document is made.

A Subversion SVN client is used to track changes on the webpage of the ADP. All the changes on the webpage of the ADP are noted down and at the same time, there is a possibility to revive at every step the previous version of the webpage.

Guidance to depositing data as well as deposit forms is available on ADP's website. ADP has reasons for data changes written in its internal documentation. Parts of are being distributed to depositors as Guide on how to prepare a data file. Any remaining changes are checked for approval by the depositor. Data cleaning is reduced mainly on additional clarification on missing values information and additional anonymization when needed, the original files are retained for future reference; changes are documented in SPSS syntax files (see sections on Ingest and Archival Storage on the webpage).

ADP is committed to preserving the authenticity of the intellectual content of the data and metadata. AIP consists of retention of original digital files and 'normalized' versions of data in a non-proprietary format saved in ASCII tab-delimited format, and documentation in PDF/A. Links between the original metadata and data and subsequent versions are maintained in the operational database. All changes are audit-trailed and documented in JIRA.

The ADP does a partial check of the identity of the depositors. Depositors would, in most cases, have a research code and are listed in SICRIS web page, where the project code and information about funding is available. Depositors are contacted frequently during the pre-archiving and archiving stages and problems with identity should be detected at one of these contact points.

For more information see the document Digital Preservation Policy (Chapters 2.6 and Section 3), sections Procedure of Ingest and Digital Management on the webpage.

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

8. Appraisal

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

The ADP has developed a collection development policy that states that the ADP holds research data that are of interest for social sciences' research, the emphasis is on problems, connected with the Slovenian society (see section Collection Development Policy on our webpage). Studies that reach theoretical, conceptual and methodological excellence have precedence, especially longitudinal and internationally comparable data that include data from Slovenia.

Long-term storage of research data demands additional efforts and expenses for their preparation in the format that will enable further use. These expenses and efforts are justified by the savings, represented in the continuous reuse of data. The ADP plans to expand its collection of research data also to other fields of science. This will enable preservation of research data of data providers from similar fields, while at the same time promoting interdisciplinary reuse of research data. The ADP connects with other similar disciplines (humanities, medicine etc.) in dealing with certain types, classes, and formats of data, whereas on the other hand it closely follows the development of its collection and stimulates the representation of less represented disciplines (educational sciences, psychology, economics etc.). The ADP follows the current trends in the field of open government data, big data, networking and interdisciplinary integration of research data.

The collection development policy aims to additionally include the professional public in determining the goals of the archive by stimulating the Council of the Social Sciences at the Slovenian Research Agency to define main problem areas and developmental initiatives to expand the collection of ADP to new fields (see Chapter 2.5 in the document Digital Preservation Policy (2017)).

The Working Group on Promotion, Education, and Training of ADP plans the development of the collection of the ADP on an annual basis. In the future, requirements of funders for a research data management plans will need to be taken into account and thus an update of the criteria for ingest and the policy document will be needed, as well as the development of technical capabilities (for example self-archiving).

In order to fulfill the sixth requirement of OAIS that is to ensure understandability and usability of data, the ADP prepares thorough documentation of all transformations in the processing data. All the changes in connection with normalization of research data and interventions in data for the purpose of anonymization are carefully documented (see Chapter 3.4.1 in the document Digital Preservation Policy (2017)). All mentioned information are accessible to final users in the form of metadata of the study (see an example). If possible, all textual documentation about the study is saved in PDF/A format, so as to preserve the look and textural feel of the documents. Data files are saved in ASCII format, including the DDI record of structure and content of data files, accompanying syntaxes for reading the files are added as well.

At the point of ingest the staff of the ADP revises the submission of the study and evaluates it on the basis of whether or not the submitted study/research data is in accordance with the quality criteria for ingest. In the selection of research data for ingest, the ADP takes into consideration the basic quality criteria and the substantive interest of the study for further analyses. The following criteria are used, when selecting the research data for ingest:

- the richness of the data in terms of relevance of the conceptualization and thematic complementarity of the ADP collection,
- the perfection of the used methodology, integrity and relevance of the research data and additional documentation for further analyses,
- the copyright of the data provider over the research data and his/her willingness to deposit data in the archive.

Received materials are first subjected to thorough examination, where the focus is put on the completeness of the documentation, substantive importance of the study, examination of the anonymization of the materials and accordance of the submitted data formats with the recommended formats for ingest (see Recommended and other forms of formats of individual materials for ingest).

Data producers and depositors are invited to prepare study description in the publicly available forms for metadata description of studies, based on the DDI Study description structure. There are also instructions contained and examples on how to fill in the forms. There is an option to prepare metadata using the DDI Metadata Editor (Nesstar Publisher). Special template for ADP required elements is available online. Depositors can learn how to

use Nesstar Publisher themselves or by attending workshops that the ADP organizes for this purpose. DDI Metadata Editor is used also to prepare metadata at the file level. If applicable, scripts are used in order to convert variable-level metadata from CAI programs.

The submitted materials are inspected by the Data Archivist and all the possible questions concerning content and formats are discussed with the data provider. If needed, the Data Archivist calls upon the data provider to complete the submitted materials in order to assure the completeness of the study documentation. Publications describing the study are part of the submission. They remain attached to study description. The Data Archivist prepares all necessary metadata to register individual units of materials, connected in the ingest package. He/she also imports descriptive metadata for study description, according to DDI, and structural metadata that enables understandability and maximal usability for future users. A subset of ELLST thesaurus for topic classification and DDI recommended vocabulary is used for specific elements when applicable. Study description is checked against study related documentation contained in publications. Citation part of metadata description is prepared also in COMARC format (a dialect of MARC standard used in a region) and is available in the COBISS system. The materials are then transformed to recommended formats for long-term storage and access. The accessible materials, intended for final users, are saved separately from archival materials.

Metadata prepared in XML are offered to users in different formats and length: from basic to detailed view, from metadata presented on the web to downloadable HTML and XML (see Catalogue of ADP, Catalogue of ADP on Nesstar, Study Description Example). Browsing and searching by using many categories (Study ID, Series ID, Content field, Depositors etc.) are made possible via the website and the Nesstar catalog.

On the webpage of the ADP, the data provider is presented with information on the recommended formats for quantitative studies that are independent of software and/or computer platforms. In the case of qualitative data, the ADP follows the recommendations on the appropriate formats for long-term storage by UK DataService and the Guidelines for Ingest, Long-Term Preservation and Access to Cultural Heritage in a Digital Form, where all the standards and most typical data formats for multimedia documents, such as text, images, audio and video materials, and other possible materials, are represented.

At the ingest of research data and other materials the ADP examines the submission formats and if needed, transforms them into formats, appropriate for digital preservation and access. In cases where there is no software available for the transformation of the formats, the data provider is informed and asked to submit materials in other formats.

For more information see the document Digital Preservation Policy (Chapters 2.5, 2.6 and 3.1), sections Organizational Infrastructure (tab Collection Development Policy), How to Get Data? and Procedure on Ingest on the webpage.

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

9. Documented storage procedures

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

The procedure of archiving in the ADP follows a fixed workflow that ranges from ingest to the dissemination of holdings. Individual work processes of ADP are described in detail in internal guides and instructions of ADP (see also Appendix A in the document Digital Preservation Policy).

Access to the system and data materials is enabled only to users and registered users. A firewall is in place for the greater security of access. To assure security, there is a limited physical access to the hardware. The transfer of research data between data providers and the ADP is possible through a safe cloud transfer. All of these measures assure appropriate information security of the ADP (see Technology and Security on the webpage)

The ADP monitors its holdings, and, in cases of changes in formats for long-term storage, adapts them to its needs. The ADP makes sure as well that all materials and metadata are machines readable in the long-run. The function of archival storage includes many security mechanisms, such as checking for errors in the information package, evaluation of the preparation of materials for long-term storage, as well as a policy of dealing with destructions of holdings.

Archival information package (AIP) consists of all submitted and accessible digital objects, which were transformed into formats that are appropriate for long-term storage. Together with the accompanying metadata, they are stored in a separate location from the dissemination information package (DIP). Backup copies of all of the packages are made on a regular basis, by which prevention against the loss of data is enabled. For assuring long-term storage, the ADP developed a strategy and thorough instructions of the process of making backup copies and the recovery of the system in cases of fallout assured (see Chapter 4.2 in the document Digital Preservation Policy).

In forming its information technology, the ADP takes into consideration the recommendations and requirements of CESSDA (for example future recommendations regarding PID and AAI). It regularly follows current trends in the development of hardware and software, which are regularly monitored and updated. Efficient capacities of storage of the entire infrastructure are provided for. The preservation of data, its distribution and the entire infrastructure of

the archive are based on an adapted IT infrastructure, where only employees and registered users have access.

The ADP is currently involved technological development to support internal processes and enable their automatization that is based on a repository software with certain upgrades that take into consideration the specificities of data, documentation, and metadata from the field of social sciences. The ADP regularly invests in upgrades and developments of services that will enable interconnectivity between different organizations and will enable the use of versioning and persistent identifiers, an overview of the copies in different formats and regimes of access.

For more information see the document Digital Preservation Policy (Chapters 2.6, Section 4 and Appendix A) and sections Digital Object Management, Technology and Security, and List of Internal Guides and Instructions on the webpage of the ADP.

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

10. Preservation plan

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

The ADP has developed a complete system of digital preservation, including the completion of fixed workflows (see Organizational Infrastructure – tab Preservation Strategy and Digital Object Management – Workflows). Internal procedures and instructions now set detailed rules and procedures for processing and managing digital objects (see also Appendix A in the document Digital Preservation Policy).

The ADP follows the requirements of the OAIS model in its digital preservation policy that demands that the information is preserved in an independently understandable way, so that the designated community is able to understand the information without needing the assistance of the experts who produced the information, even if the digital environment, in which they were primarily stored, becomes obsolete (see Model of Preservation on the webpage).

The basic strategy of digital preservation in the ADP is normalization at ingest. For this purpose, the ADP has set rules of appropriate formats of data files that are being accepted from data providers, as well as from them arising formats for long-term digital preservation (see Chapter 3.1.2 in the document Digital Preservation Policy).

The ADP has an explicit mission to provide the long-term digital preservation of its holdings. The main aims of the digital archive are long-term storage of retained data files and other materials, especially in connection with the following principles:

- Preserving data integrity: ensuring that the archived data are protected against unauthorized alteration.

- Preserving authenticity: ensuring that the digital objects come from a documented originator and that they are what they purport to be.

- Completeness: it is clear that no parts of the digital object are missing.

- Preserving readability: it is possible to show and interpret at least the most recent version of a digital information object at any time. In this context, it is important to know which formats occur for each version.

- Preserving locatability: persistent identifiers (URN) and entries in relevant directories and search engines are used.

- Preserving confidentiality: taking into consideration relevant legal rules, ethical and disciplinary standards.

By meeting the above principles and creating external transparency of its activities, the ADP considerably contributes to the credibility of the data archive, which is one of the core aims of the Digital Preservation Policy document.

Agreement on ingest in the form of a License Agreement, signed by the data depositor and the ADP, defines the relationship between the two parties: it gives rights to the ADP to process the study for the purpose of digital preservation and gives rights of access to research data to users. By signing the agreement, the data depositor in his/her behalf or under researchers authority agrees that the ADP prepares, stores and distributes research data (see the document Digital Preservation Policy, Chapter 3). With the License Agreement, the ADP gets rights on the basis of which it can (1) prepare materials for storage and distribution and (2) preserve and distribute materials. With such arrangement the ADP is fulfilling the second obligation of OAIS – it is necessary to obtain sufficient rights for dealing with information to be able to provide their long-term storage.

In order to fulfill the sixth requirement of OAIS that is to ensure understandability and usability of data, the ADP follows detailed documentation of all transformations in the processing data by which it assures the preservation of the authenticity of the digital objects. All the changes in connection with normalization of research data and interventions in data for the purpose of anonymization are carefully documented (see Chapter 3.4.1 in the document Digital Preservation Policy). All information mentioned are accessible to final users in the form of metadata of the study. The formats of data files, used by the ADP, are chosen by taking into consideration

challenges of long-term preservation, wherein proprietary, outdated and rarely used formats are being avoided. If possible, all textual documentation about the study is saved in PDF/A format, so as to preserve the look and textural feel of the documents. Data files are saved in ASCII format, including the DDI record of structure and content of data files, accompanying syntaxes for reading the files are added as well.

The staff of the ADP regularly follows the development of the field of preservation in similar organizations, for example amongst the members of the CESSDA, within the professional association IASSIST, and actively cooperates in professional debates. On the national level, the ADP cooperates with the National and University Library, the Archive of the Republic of Slovenia and other similar institutions from the field of the protection of scientific and cultural heritage (conferences in the organization by NUK). The staff of the ADP is involved in regular professional training and cooperates in knowledge exchanges between archival and digital humanists in questions concerning digital storage and efficient development of data services (NUK, UKM, CTK, Archive of the Republic of Slovenia, SURS and other research libraries).

For more information see the document Digital Preservation Policy (Chapters 2.1, 2.4, 2.6 and 3.2), sections Organizational Infrastructure and Digital Object Management on the webpage.

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

11. Data quality

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

The ADP follows the OAIS model requirements by providing sufficient amount of information on the study (metadata) that enable final users to independently understand individual parts of the data file and/or additional materials (see the Model of Preservation on the webpage). By doing so, the ADP fulfills the mandatory responsibility of OAIS since it regularly updates and improves the metadata of studies, according to the identified needs of users.

The use of standard metadata and interconnectivity of identifiers with other information services enable quality and sustainable directed development of data services. This represents the base of connecting various services of scientific information giving, and at the same time represents the basis for coordination and cooperation in the framework of collective services of the international infrastructural unit of the CESSDA. Interoperability is also one of the exposed focuses of the OAIS standard and the demands of the European Commission in the framework of the open access to research data H2020. Study descriptions according to DDI are interoperable with the catalogs that are powered by DDI formats (PaSC, DataVerse etc.).

The staff of the ADP cooperates in the projects of harmonizing the use of metadata on the level of the project group in CESSDA, which includes discussing the use of terminology and developing methods to adjust the metadata to the technological advancements.

Within the Data Management function of the OAIS model, the ADP maintains databases of descriptive metadata, identifying and describing the archived information. The primary functions of data management also include performing inquiries on these databases and generating reports in response to requests from other functional entities within the OAIS (for example from ingest, administration, access) and conducting updates to the databases as new information arrives, or existing information is modified or deleted (for more information on metadata management in databases see Chapter 3.4 in the document Digital Preservation Policy).

Metadata and other materials, connected with the study, are available to all users of the webpage of ADP without registration. Access to microdata is subjected to prior registration. By registering, users obtain the possibility to

make online analyses on Nesstar and/or the possibility to download data files in the selected format on their personal computers.

Users may access the following study metadata on the webpage of ADP:

a) Metadata of studies with microdata available at ADP

The ADP holds metadata together with microdata that is accessible through the ADP. The user needs to agree with the rules of the ADP in order to use such microdata.

b) Metadata of studies with microdata available in other organizations

The ADP prepares also metadata of studies that have microdata available in other archives or organizations, such as some internationally comparable data and unprotected microdata from official statistics. The ADP saves and disseminates their metadata and links to the data. The access to data files is subjected to the rules of the organization that is responsible for the preservation and dissemination of the study.

The ADP stimulates and recommends data providers to add to the submission package also research reports and other accompanying publications that could be beneficial in the secondary use of research data. All of the reports and accompanying publications to the study are added to the study descriptions in the catalog of ADP in forms of citations to related works (see tab Accompanying materials in the example).

In the future, the ADP will develop new ways to monitor citations in the environment of bibliographic information services (for example in the framework of DataCite model).

For more information see the document Digital Preservation Policy (Chapters 3.2.1, 3.2.3 and 3.4) and sections Digital Object Management, Read Terms of Use and Understand Descriptions in the Catalogue on the webpage of the ADP.

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

12. Workflows

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

ADP has policies and procedures (defined in internal Handbook, parts of it are published in Štebe and Vipavc Brvar, 2011) that follow the archival life cycle and predetermined criteria that apply at each stage (see also Appendix A in the document Digital Preservation Policy). Management of all elements is managed in JIRA (project tracking software). Reports are exported at the end of a project in a PDF file and saved together with the study documentation and materials in the archival package.

The “data pipeline” at the ADP parallels the OAIS Reference Model and the research data life cycle model. Storage is managed according to strict criteria regarding media, redundancy, etc. Staff who handles data is trained on issues of disclosure risk. They hold relevant degrees in social sciences or statistics and are provided with the appropriate professional development opportunities. There is an internal Handbook that defines processes for data transformations as well as instructions for the proper use of SPSS syntax. Transformation of primary data files is saved and can always be verified. If relevant, the changes can also be published. If ad-hoc decisions are needed to deal with special cases, the decisions are made by the Head of Organization and documented in the metadata and/or operational database.

The majority of the data that the ADP manages are quantitative in nature, but other types of data are also processed and preserved (mainly qualitative interviews). A constant following of the technological advancements in this field enables following and implementing current trends and best practices.

The researcher, interested in depositing a study to the Catalogue of the ADP, firstly informs the ADP of his/her willingness by contacting the ADP directly via e-mail or by filling in the online form Make an Acquisition Proposal. The Commission for the Acquisition and Evaluation of Studies revises the submission of the study and evaluates it on the basis of whether or not the submitted study/research data is in accordance with the quality criteria for ingest. In the selection of research data for ingest, the ADP takes into consideration the basic quality criteria and the substantive interest of the study for further analyses. The following criteria are used, when selecting the research data for ingest:

- the richness of the data in terms of relevance of the conceptualization and thematic complementarity of the ADP collection,

- the perfection of the used methodology, integrity and relevance of the research data and additional documentation for further analyses,

- the copyright of the data provider over the research data and his/her willingness to deposit data in the archive.

If the Commission makes the decision to include the proposed study in the Catalogue, the data producers and depositors are invited to prepare study description in the publicly available forms for metadata description of studies, based on the DDI Study description structure and to submit all possible materials, connected with the study. Received materials are first subjected to thorough examination, where the focus is put on the completeness of the documentation, substantive importance of the study, examination of the anonymization of the materials and accordance of the submitted data formats with the recommended formats for ingest (see Recommended and other forms of formats of individual materials for ingest). The submitted materials are inspected by the assigned Data Archivist and all the possible questions concerning content and formats are discussed with the data provider. If needed, the Data Archivist calls upon the data provider to complete the submitted materials in order to assure the completeness of the study documentation. Publications describing the study are part of the submission. They remain attached to study description. The Data Archivist prepares all necessary metadata to register individual units of materials, connected in the ingest package. He/she also imports descriptive metadata for study description, according to DDI, and structural metadata that enables understandability and maximal usability for future users. A subset of ELLST thesaurus for topic classification and DDI recommended vocabulary is used for specific elements when applicable. Study description is checked against study related documentation contained in publications. Citation part of metadata description is prepared also in COMARC format (a dialect of MARC standard used in a region) and is available in the COBISS system. The materials are then transformed to recommended formats for long-term storage and access. The accessible materials, intended for final users, are saved separately from archival materials. All procedures and changes to the study files, as well as the entire communication with the depositor are constantly noted down in the study task in the documentation system Jira. The detailed workflow from the point of acquisition to dissemination is available on the webpage of the ADP in the section Workflow.

If the Commission makes a decision not to include the proposed study in the Catalogue, because it does not meet the criteria, the ADP informs the depositor of the decision and provides him/her with a detailed justification of the decision.

The ADP follows the administration function of the OAIS model in managing its daily tasks of the OAIS model and the coordination of its individual parts. More information on tasks in individual parts of the OAIS model of the ADP is provided in chapter 3.6 in the document Digital Preservation Policy).

Director of the Administration is responsible for organizing and monitoring of the daily administrative tasks, defined by the OAIS model - guidance and control over daily fulfillment of tasks of heads of individual functional units, including the final revision of work results on studies made by the Data Archivists. In cases, where a change in the management of the workflows is needed, the Head of the Organization makes the final decisions.

For more information see the document Digital Preservation Policy (Chapters 2.7 and 3.6) and sections Digital Object Management and List of Internal Guidelines and Instructions on the webpage of the ADP.

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

13. Data discovery and identification

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

3. In progress: We are in the implementation phase.

Self-assessment statement:

Study descriptions are published on ADP's website in the Catalog of the ADP and on ADP's Nesstar catalog. Both have search facilities, and the ADP provides online guidance on how to search data and documentation, how to understand study descriptions and analyze data. Study descriptions are available in Slovenian and in English. Data descriptions are available online as machine readable DDI 2.0 XML files. When applicable, a subset of ELLST thesaurus for topic classification and DDI recommended vocabulary is used for specific elements.

ADP website offers customized Google searching of study descriptions down to the variable level text. Searching on Nesstar is possible in simple and in advanced mode, which offers a customized selection of elements inside the DDI structure.

Data files are available in various popular file formats (SPSS (*.sav), SPSS Portable (*.por), Statistica, Stata v.8, Stata v.7. DIF, Dbase, SAS). Direct download, where users can choose their preferred format, is possible through the Nesstar browser.

The ADP currently uses the ADP Study ID for study classification, which is unique for every study inside the catalog. The ADP is in the process of developing a system of URN unique identifiers in collaboration with the National and University Library. Currently, the ADP is developing a program FEDORA for repository control of the holdings description, which will contain FOXML and accompanied identifiers, including the information on checksum (MD5), traceability, accessibility of different versions etc. Through this application a PID at the study level for each study will be assigned, following with versions granulated on the level of the particular digital object. ADP prepares Dublin Core metadata for each digital object in the DIP and will offer the OAI-PMH service for metadata harvesting.

Within the working group of the CESSDA, the ADP is involved in the preparation of a common CESSDA catalog metadata that provides for a synchronized metadata searchable facilities. It is planned, in the period of the next 2 years, to include the catalog of ADP in other national and international services of merging and displaying information, such as OpenAire, DataCite, Data Catalogue Vocabulary Application Profile (DCAT - AP), Digital

Library of Slovenia - dLib, National Open Science Portal, and integrating with the existing and developing activities of other networks of scientific information and open access.

The ADP assures a standardized possibility to cite research data and accompanying materials from the catalog, with which it assures final users the possibility to access research data and materials, including the appropriate and permanent citation format that enables traceability. Each study in the catalog of ADP is accompanied by the information on proper citation (see How to cite this study?). By registering, the users oblige to properly cite the used materials (see General Provisions and Terms of Use). The ADP calls researchers to inform the ADP of all possible publication on the basis of the data used from the catalog of the ADP. Guidance on data citation practice is also provided for at ADP users' workshops.

For more information see the document Digital Preservation Policy (Chapter 3.5) and sections within How to get data? on the webpage of the ADP.

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

14. Data reuse

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

3. In progress: We are in the implementation phase.

Self-assessment statement:

The Study Description form and the license agreement define what metadata is needed for proper study documentation (descriptive, structural and administrative). The Data Archivist prepares all necessary metadata to register individual units of materials, connected in the ingest package. He/she also imports descriptive metadata for study description, according to DDI 2.0 standard, and structural metadata that enables understandability and maximal usability for future users. The materials are then transformed to recommended formats for long-term storage and access (see section on Workflow on the webpage).

The formats of data files, used by the ADP, are chosen by taking into consideration challenges of long-term preservation, wherein proprietary, outdated and rarely used formats are being avoided. If possible, all textual documentation about the study is saved in PDF/A format, so as to preserve the look and textural feel of the documents. Data files are saved in ASCII format, including the DDI record of structure and content of data files, accompanying syntaxes for reading the files are added as well.

Metadata prepared in XML are offered to users in different formats and length: from basic to detailed view, from metadata presented on the web, to downloadable HTML and XML. Browsing and searching by using many categories (Study ID, Series ID, Content field, Depositors etc.) is made possible via the website and on Nesstar browser.

The ADP has set rules for appropriate formats of data files, as well as from them arising formats for long-term digital preservation (see Chapter 3.1.2 in the document Digital Preservation Policy). In its digital preservation strategy, the ADP aims to follow the principle of readability, meaning that it is possible to show and interpret at least the most recent version of a digital information object at any time. In this context, it is important to know which formats occur for each version (see Preservation Strategy section on the webpage).

The staff of the ADP cooperates in the projects of harmonization of the use of metadata on the level of the project group in CESSDA, which includes debating on the fixed use of terminology and developing methods to adjust the metadata to the technological advancements.

For more information see the document Digital Preservation Policy (Chapters 2.6, 3.2 and 3.4) and sections Organizational Infrastructure and Digital Object Management on the webpage of the ADP.

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

15. Technical infrastructure

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

3. In progress: We are in the implementation phase.

Self-assessment statement:

The data services in the ADP are functioning on a well supported operating system and other infrastructural program foundations that are suitable for the data services that the ADP offers to its designated communities (see the Appendix A: Technology and Security in the document Policy of Digital Preservation or List of Internal Guidelines and Procedures on the webpage). For its activities, the ADP uses the network of the Academic and Research Network of Slovenia ARNES that assures a stable, secure and efficient functioning of the information-communication infrastructure (see General provisions of the use of ARNES network services -Arnes assures that it manages the e-infrastructure, networking resources, and services carefully and in accordance with the best practices and technical standards and thus with the best effort attends to the needs of its users).

In forming its information technology, the ADP takes into consideration the recommendations and requirements of CESSDA. It follows current trends in the development of hardware and software, which are regularly monitored and updated. Efficient capacities of storage of the entire infrastructure are provided for. The preservation of data, its distribution and the entire infrastructure of the archive are based on an adapted IT infrastructure, where only employees and registered users have access.

The ADP regularly invests in upgrades and developments of services that will enable interconnectivity between different organizations and will enable the use of versioning and persistent identifiers, an overview of the copies in different formats and regimes of access. The ADP will also continue with cooperating with NUK and ARNES regarding the connectivity with safe digital storage on different locations.

One of the continuous activities of the ADP is its cooperation in developing tools in the international environment, their testing, and implementation. In addition to Nesstar and online environments with contemporary documentary systems (Django, Wordpress, Jira) that the ADP is regularly maintaining, the ADP is planning to introduce technological support for researchers that will enable controlled handling of research data throughout the duration of the project and will facilitate the transfer of data, gathered within the project, to digital preservation in ADP after the end of the project.

Stated goals of long-term digital storage will be reached with a combination of introducing open access tools, such as DataVerse (development of an additional service for self-archiving), and by adapting and the opening of internally developed repositories tools, based on Fedora Commons, to manage processes in the archive. These tools will serve as external support in preparing data and documentation and will enable the automatization of ingest.

For more information see the document Digital Preservation Policy (Chapter 4.1) and the section Technology and Security on the webpage of the ADP.

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

16. Security

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

3. In progress: We are in the implementation phase.

Self-assessment statement:

Concerning the access to data with disclosure risk, the ADP follows its procedure of the protection of sensitive data, firstly by protecting the data and secondly by managing access to various types of data for various types of users (see Chapter 3.5 in the document Digital Preservation Policy and a section on Access on the webpage). Archival submission package that contains materials in their original formats and states (possibly also sensitive data) is kept separated from the dissemination package that the users may access. Access to the archival package is given only to authorized personnel of the ADP. The data provider prepares all the different versions of microdata, which have different levels of protection for different levels of access with the support of the ADP.

In the case when microdata is sensitive or unprotected, they may be accessible only to a limited range of users (established researchers who make a special application for access that is then evaluated by the Commission for the Protection of Confidentiality). Possible types of access are two: access to data on portable media or access in a secure environment (office of the ADP). More on the process of obtaining access to less protected microdata can be read in Chapter 3.5 in the document Digital Preservation Policy and in the section Read Terms of Use on the webpage of the ADP.

The ADP is committed to the security of its physical spaces, equipment, research data and other materials, its services and users. There are three physical rooms, where all the computer equipment and materials are stored. The rooms are part of the Faculty of Social Sciences of the University of Ljubljana, which under its own protocols attends for the security of its premises, such as fire safety and physical security of premises, including the permanent presence of a security guard.

The ADP follows security instructions and rules of the Faculty of Social Sciences in cases of different natural disasters (available only internally):

- Rules on the Measures to Protect the Information-Communication Systems at the Faculty of Social Sciences (2010),

- House Rules of the Faculty of Social Sciences,

- Fire Regulations of the Faculty of Social Sciences.

To assure security, all rooms with computers and materials need to be locked if there is no staff member present. Two laptops are available in ADP, for the safety of which their users are responsible. The ADP assures secure access to its servers that are available only to the employees of ADP and their external service providers. Physical access to servers are enabled only to the staff of the Computer Center of the Faculty of Social Sciences (RC FDV), external service providers with a valid contract and the staff of ADP, but only in the presence of a representative of the RC FDV. Access to servers at ARNES is available only for the staff of ARNES.

Access to the system and materials is enabled only to users and registered users. A firewall is in place for a greater security of access. To assure security, there is a limited physical access to the hardware. The transfer of research data between data providers and the ADP is possible through a safe cloud transfer. All of these measures assure appropriate information security of the ADP.

The network of ARNES that the ADP uses in its functioning is under the management of ARNES. ARNES has in place established mechanisms of automatic control and a control center of technical assistance, whereas, outside the office hours, issues in the working of the network are eliminated by the emergency services. With these measures, ARNES assures the reliability, quality, and security of their services. ARNES is trying to establish redundancy in all of its network services, which diminishes the possibilities of fallouts. In the case of unpredictable events, ARNES assures to eliminate issues in the shortest reasonable time.

For assuring long-term storage, the ADP developed a strategy and thorough instructions of the process of making backup copies and the recovery of the system in cases of fallout (see field Technology and Security in Appendix A in the document Policy of Digital Preservation or List of Internal Guidelines and Procedures on the webpage). Software solutions enable automatic synchronization of backup copies on a predetermined backup server, where data files are saved in encrypted versions. Encrypted data files are then stored in three different locations: NAS server, external iSCI disc (Arnes Storage – Technological park of Ljubljana) that copies through SSH, and on an external hard disk. This way backup copies are made in the case of severe events in the server room (for example destructive fire). Backup copy outside the location of the archive on the other side enables backup copies in cases of greater disruptive events at the Faculty of Social Sciences (destructive fire, bomb, earthquake etc.).

We are currently developing more thorough procedures of long-term storage and handling of materials for the Catalogue of the ADP, as well as developing additional services for self-archiving.

By the end of 2017, the ADP will develop a new software based on Fedora Commons in cooperation with NUK, which will enable safer and more automatized method of digital preservation of materials. In the new system, one copy of data and additional materials will be saved on the server of the ADP, and one copy will be saved at NUK. The new system, based on Fedora Commons, will serve as external support in preparing data and documentation and will enable the automatization of ingest of studies that go through the normal deposit procedure of the ADP (the evaluation and ingest phase).

Additionally, in order to respond to the growing demand of the scientific community for data openness and data sharing, we will develop in 2018 a self-archiving system that will be based on Dataverse. The Dataverse Catalogue of the ADP will be kept on the server of the ADP, separately from the regular Catalogue of the ADP and will enable the ingest of studies without prior evaluation.

The ADP does not have a systematic analysis of possible security threats or a risk management plan. In the future, a policy of acknowledging and managing of risks will be prepared, following the requirements of relevant standards.

For more information see the document Digital Preservation Policy (Chapter 4.2) and the section Technology and Security on the webpage of the ADP.

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

17. Comments/feedback

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

0. N/A: Not Applicable.

Self-assessment statement:

Note to the reviewers:

All of the URL links to the documentation were visited at the time of the application entry (August 29, 2017) and were functioning properly.

The text was run through the spell-checker, so the spelling mistakes were corrected.

Additional clarifications were made in responses 5 and 16.

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments: