Guide to preservation in DTU Data

Digital preservation refers to the series of managed activities necessary to ensure continued access to digital materials beyond the limits of media failure or technological change for as long as necessary (Digital Preservation Handbook, p.24[1]). DTU Data aims to be a trusted repository, where preservation practices are well defined and understood by users.

Responsibility

DTU Library manages DTU Data and is responsible for maintaining all documentation and user support on DTU Data. DTU Library aims to make stored metadata and data findable, accessible and understandable in the long term. DTU Library collaborates with the IT department, which is responsible for the technical infrastructure, hardware migration and IT security measures.

Data appraisal

Data may be created with one specific purpose in mind. However, in the future, they may potentially only have value if saved in open formats. Further, they may have value for reuse in other contexts.

Data preservation only creates value, if supported by documentation of data provenance, and of software and hardware requirements for reusing the data.

DTU Data staff will review the metadata of your submitted item to increase findability, interoperability and reuse for data users[2]. This is done in collaboration with the depositor. As depositor, you must also evaluate the item in terms of scientific quality and context. These are important aspects, when appraising data for preservation actions.

Preservation of metadata

Digital Object Identifiers (DOIs) in DTU Data are registered with DataCite according to the DataCite Metadata Schema, hence DTU Library is obliged to secure the persistent access to metadata either through DTU Data or another openly accessible repository.

[1] http://www.dpconline.org/docs/digital-preservation-handbook/299-digital-preservation-handbook/file

[2] See “Deposition workflow” on DTU Inside

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Preservation of item files

DTU Data applies two levels of file support:

1. Bit-level preservation: Access to the file in its submission format is provided
2. Full preservation: Usability of files will require actions such as migration, normalization and conversion.

With bit-level preservation, DTU Data guarantees access to files for a minimum of 10 years (see Curation level 2 below). Therefore, extended access to item files may depend on the files being uploaded in preferred formats. See a list of preferred formats at DTU Inside.

For files stored outside DTU Data see Curation level 3 below.

Long-term preservation

Some research data and outputs may be assessed of having so high value that long-term preservation, i.e. for more than 10 years, is wanted (see Curation level 1 below).

Some research data are mandatory to report to the National Archives[3,4,5]. After reporting, the National Archives will evaluate which data should be preserved for more than 100 years. Cost for preservation actions shall be borne by the research project or department. If your research data are excepted for reporting, you still have the possibility to get an evaluation by the National Archives if the research data can be transferred for long-term preservation.

It is possible to use DTU Data for transferring data to the National Archives.

It is possible to use DTU Data for long-term preservation of highly valuable data that are not preserved by the National Archives (see Curation level 1). Such full preservation actions requires dedicated resource for file format migration and for hardware migration (Digital Preservation Handbook, p.26[1]). Also, data and preservation actions need regular reappraisal. Therefore, an agreement on actions and expenses is needed with DTU Library and the IT department.

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[3] DTU' Research Data Management Policy: https://www.bibliotek.dtu.dk/en/publishing/research-data/policy

[4] Danish National Archives https://sa.dk/

[5] BEK nr. 514 af 20/04/2020. Bekendtgørelse om anmeldelse af digitale forskningsdata skabt af statslige myndigheder https://www.retsinformation.dk/eli/lta/2020/514

Contact datamanagement@dtu.dk before you prepare your research data for long-term preservation.

Curation levels for research data in DTU Data

Level 1
Availability for more than 10 years must be determined at research group or department level according to local guidelines (see 3 above).
Actions include curation of variables and files for long-term preservation. Data is converted into long-term formats. Documentation of variables and used metadata standards are preserved with other documentation. Long-term accessibility is also ensured by hardware migration.

Data may be fit for reporting to the National Archives. This will be determined with the research group/department if not already required according to Danish legislation(see 5 above).

Examples are time-series data, cohort studies, databases. Research data of high value for the technical sciences or nationally.

Level 2
Data are available in the same format as deposited. Data are available for minimum 10 years, but only backed-up at bit-level. Deposition in preferred file formats are necessary for usability beyond 10 years.

Secondary use of data is possible for example for validation of published results.

Examples are data and code supporting publications, models, videos and images. Data with insufficient documentation.

Level 3
No file preservation actions are done with files stored outside DTU Data. For example if data are stored elsewhere and linked with a metadata record published in DTU Data. This can include data archived in department archives, such as confidential data (including personal data) or data stored on other web-services.

Some data that cannot be shared openly may still need long-term preservation according to Danish legislation(see 5 above).