

Data Management Plan Template: Arts-Based Research

Abstract

This template will assist you in creating a data management plan for arts-based research (ABR). It is intended for researchers and artists who use artistic processes as research methods (i.e., arts-based methods). ABR is used across disciplines and encompasses diverse understandings of the arts, research, and how they intersect. In this template, ABR is an umbrella term for all the ways the arts are adapted to answer research questions, including those described as arts research, artistic research, and research-creation. You can use this template on its own, or in combination with others on the [DMP Assistant](#) when using arts-based methods with other methodological approaches.

Administrative Details

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Data Collection

What types of data will you create and/or collect? What methods, arts-based and otherwise, will you use?

Artwork is a prominent type of data in ABR that is commonly used as content for analysis and interpretation. Artworks that exist as, or are documented in, image, audio, video, text, and other types of digital files facilitate research data management. The same applies to preparatory, supplemental, and discarded artworks made in the creation of a principal one. Research findings you create in the form of artwork can be treated as data if you will make them available for researchers, artists, and/or the public to use as data. Information about artistic processes can also be data. Read more on artwork and artistic processes as data at [Kultur II Group](#) and [Jisc](#).

Example: Drawings, songs, poems, films, short stories, performances, interactive installations, and social experiences facilitated by artists are examples of data. Data on artistic processes can include documentation of techniques, stages, and contexts of artistic creation, and the physical materials (e.g., paints, textiles, found objects) and tools (e.g., pencils, the body, musical instruments) used to create artwork. Other types of data are audio recordings of interviews, transcripts, photographs, videos, field notes, historical documents, social media posts, statistical spreadsheets, and computer code.

Do you plan to use datasets published by others? Where will you collect them from?

Researchers and artists can publish their data for others to reuse. Research data repositories and government agencies are sources of published data (e.g., [Federated Research Data Repository](#), [Statistics Canada](#)). Your university may have its own research data repository. Academic journals may host published data as supplementary material connected to their articles. If you need help finding resources for published data, contact your institution's library or reach out to the Portage DMP Coordinator at support@portagenetwork.ca.

How will you digitally document artwork, artistic processes, and other non-digital data? What conditions, hardware, software, and skills will you need?

Non-digital data should be digitized when possible. Digitization is needed for many reasons, including returning artwork to participants, creating records of performances, and depositing data in a repository for reuse. When planning your documentation, consider what conditions (e.g., good lighting, sound dampening), hardware (e.g., microphone, smartphone), software (e.g., video editing program), and specialized skills (e.g., filming techniques, image-editing skills) you will need. High quality documentation will make your data more valuable to you and others.

What file formats will your data be created and/or collected in?

Open (i.e., non-proprietary) file formats are preferred when possible because they can be used by anyone, which helps ensure others can access and reuse your data in the future. However, proprietary file formats may be necessary for certain arts-based methods because they have special capabilities for creating and editing images, audio, video, and text. If you use proprietary file formats, try to select industry-standard formats (i.e., those widely used by a given community) or those you can convert to open ones. [UK Data Service](#) provides a table of recommended and acceptable file formats for various types of data.

Original files of artwork and its documentation should be in uncompressed file formats to maximize data quality. Lower quality file formats can be exported from the originals for other purposes (e.g., presentations). Read more on file formats at [UBC Library](#) or [UK Data Service](#).

What practices will you use to structure, name, and version-control your files?

Good data organization includes logical folder hierarchies, informative and consistent naming conventions, and clear version markers for files. File names should contain information (e.g., date stamps, participant codes, version numbers, location, etc.) that helps you sort and search for files and identify the content and right versions of files. Version control means tracking and organizing changes to your data by saving new versions of files you modified and retaining the older versions. Good data organization practices minimize confusion when changes to data are made across time, from different locations, and by multiple people. Read more on file naming and version control at [UBC Library](#), [University of Leicester](#), and [UK Data Service](#).

Example: A poem written to analyze a transcript could be named AnalysisPoem_IV05_v03.doc, meaning version 3 of the analysis poem for the interview with participant 05. Revisions to the poem could be marked with _v04, _v05, etc., or a date stamp (e.g., _20200112, _20200315).

Metadata

What metadata will you create to ensure your data can be interpreted and reused in the future?

[Cornell University](#) defines metadata as “documentation that describes data” (see also [Concordia University Library](#)). Creating good metadata includes providing information about your project as well as each item in your database, and any other contextual information needed for you and others to interpret and reuse your data in the future. [CESSDA](#) and [UK Data Service](#) provide examples of project- and item-level metadata. Because arts-based methods tend to be customized and fluid, describing them in your project-level metadata is important.

Example: Project-level metadata can include basic information about your project (e.g., title, funder, principal investigator, etc.), research design (e.g., background, research questions, aims, artists or artwork informing your project, etc.) and methodology (e.g., description of artistic process and materials, interview guide, transcription process, etc.). Item-level metadata should include basic information about artworks and their documentation (e.g., creator, date, subject, copyright, file format, equipment used for documentation, etc.).

What metadata standard will you use?

A metadata standard is a set of established categories you can use to describe your data. Using one helps ensure your metadata is consistent, structured, and machine-readable, which is essential for depositing data in repositories and making them easily discoverable by search engines. While no specific metadata standard exists for ABR, you can adopt existing general or discipline-specific ones (for more, see [Queen's University Library](#) and [Digital Curation Centre](#)). For more help finding a suitable metadata standard, you may wish to contact your institution's library or reach out to the Portage DMP Coordinator at support@portagenetwork.ca.

Example: [Dublin Core](#) and [DDI](#) are two widely used general metadata standards. Discipline-specific standards used by museums and galleries (e.g., [CCO](#), [VRA Core](#)) may be useful to describe artworks at the item level. You can also explore arts-specific data repositories at re3data.org to see what metadata standards they use.

How will you consistently create metadata during your project?

Creating metadata should not be left to the end of your project. A plan that lays out how, when, where, and by whom metadata will be captured during your project will help ensure your metadata is accurate, consistent, and complete. You can draw metadata from files you have already created or will create for your project (e.g., proposals, notebooks, interview guides, file properties of digital images). If your arts-based methods shift during your project, make sure to record these changes in your metadata. The same practices for organizing data can be used to organize metadata (e.g., consistent naming conventions, file version markers).

Example: One way to record metadata is to place it in a separate text file (i.e., README file) that will accompany your data and to update it throughout your project. [Cornell University](#) provides a README file template you can adapt. You can also embed item-level metadata in certain files, such as placing contextual information and participant details for an interview in a summary page at the beginning of a transcript. Creating a data list, a spreadsheet that collects all your item-level metadata under key categories, will help you and others easily identify items, their details, and patterns across them. [UK Data Service](#) has a data list template you can adapt.

Storage, Backup, and Access

How much storage space will you need for digital data during your project? How long will you store them?

Estimate the storage space you will need in megabytes, gigabytes, terabytes, etc., and for how long this storage will need to be active. Take into account file size, file versions, backups, and the growth of your data, if you will create and/or collect data over several months or years.

How and where will you store and back up digital data during your project?

Digital data can be stored on optical or magnetic media, which can be removable (e.g., DVDs, USB drives), fixed (e.g., computer hard drives), or networked (e.g., networked drives, cloud-based servers). Each storage method has pros and cons you should consider. Having multiple copies of your data and not storing them all in the same physical location reduces the risk of losing your data. Follow the 3-2-1 backup rule: have at least three copies of your data; store the copies on two different media; keep one backup copy offsite. A regular backup schedule reduces the risk of losing recent versions of your data.

Securely accessible servers or cloud-based environments with regular backup processes are recommended for your offsite backup copy; however, you should know about the consequences of storing your data outside of Canada, especially in relation to privacy. Data stored in different countries is subject to their laws, which may differ from those in Canada. Ensure your data storage and backup methods align with any requirements of your funder, institution, and research ethics office. Read more on storage and backup practices at the [University of Sheffield Library](#) and [UK Data Service](#).

Example: Many universities offer networked file storage with automatic backup. [Compute Canada's Rapid Access Service](#) provides principal investigators at Canadian postsecondary institutions a modest amount of storage and other cloud resources for free. Contact your institution's IT services to find out what secure data storage services are available to you.

How will you store non-digital data during your project?

Describe how you will store your non-digital data and what you will need to do so (e.g., physical space, equipment, special conditions). Include where you will store these data and for how long. Ensure your storage methods for non-digital data align with any requirements of your funder, institution, and research ethics office.

How will your research team and others transfer, access, and/or modify data during your project?

Research team members, other collaborators, participants, and independent contractors (e.g., transcriptionists, videographers) are examples of individuals who can transfer, access, and modify data in your project, often from different locations. Ideally, a strategy for these activities facilitates cooperation, ensures data security, and can be adopted with minimal instructions or training. If applicable, your strategy should address how raw data from portable recording devices will be transferred to your project database (e.g., uploading raw video data within 48 hours, then erasing the camera).

Relying on email to transfer data is not a robust or secure solution, especially for exchanging large files or artwork, transcripts, and other data with sensitive information. Third-party commercial file sharing services (e.g., Google Drive, Dropbox) are easy file exchange tools, but may not be permanent or secure, and are often located outside Canada. Contact your librarian and IT services to develop a solution for your project.

Preservation

What are your preservation needs for your digital data?

Preservation means storing data in ways that make them accessible and reuseable to you and others long after your project ends (for more, see [Ghent University](#)). Many factors inform preservation, including policies of funding agencies and academic publishers, an understanding of the enduring value of a dataset, and ethical frameworks informing a project (e.g., making artwork co-created with community members accessible to their community).

Creating a “living will” for your data can help you decide what your preservation needs are in relation to these or other factors. It is a plan describing how future researchers, artists, and others will be able to access and reuse your data. If applicable, consider the needs of participants and collaborators who will co-create and/or co-own artwork and other data. Your “living will” can address where you will store your data, how they will be accessed, how long they will be accessible for, and how much digital storage space you will need.

Where will you preserve your research data for the long-term, if needed?

Deposit in a data repository is one way to preserve your data, but keep in mind that not all repositories have a preservation mandate. Many repositories focus on sharing data, not preserving them, meaning they will store and make your data accessible for a few years, but not long term. It can be difficult to distinguish repositories with preservation services from those without, so carefully read the policies of repositories you are considering for preservation and, if possible, before your project begins. If you need or want to place special conditions on your data, check if the repository will accommodate them and, if so, get written confirmation. Read more on choosing a repository at [OpenAIRE](#).

Example: Data repositories labelled as “trusted” or “trustworthy” indicate they have met high standards for receiving, storing, accessing, and preserving data through an external certification process. Two certifications are [Trustworthy Digital Repository](#) and [CoreTrustSeal](#).

A repository that lacks certification may still be a valid preservation option. Many established repositories in Canada have not gone through a certification process yet. For repositories without certification, you can evaluate their quality by comparing their policies to the standards of a certification. Read more on trusted data repositories at [The University of Edinburgh](#) and [OpenAIRE](#).

How will you ensure your digital data is preservation ready?

Converting to preservation-friendly file formats, checking for unintended changes to files, confirming metadata is complete, and gathering supporting documents are practices, among others, that will help ensure your data are ready for preservation.

Example: Open file formats are considered preservation-friendly because of their accessibility. Proprietary file formats are not optimal for preservation because they can have accessibility barriers (e.g., needing specialized licensed software to open). Keep in mind that preservation-friendly files converted from one format to another may lose information (e.g., converting from an uncompressed TIFF file to a compressed JPEG file), so any changes to file formats should be documented and double checked. See [UK Data Service](#) for a list of preservation-friendly file formats.

What are your preservation needs for your non-digital data?

Sometimes non-digital data cannot be digitized or practical limitations (e.g., cost) prevent them from being digitized. If you want others to access and reuse your non-digital data, consider where they will be stored, how they will be accessed, and how long they will be accessible for. Sometimes, you can deposit your data in an archive, which will take responsibility for preservation and access. If non-archivists (e.g., you, a partner community centre) take responsibility for preservation, describe how your non-digital data will be protected from physical deterioration over time. Make sure to incorporate non-digital data into the “living will” for your data. Contact the archives at your institution for help developing a preservation strategy for non-digital data. Read more on preserving non-digital data at [Radboud University](#).

Are there data you will need or choose to destroy? If so, how will you destroy them securely?

Certain data may not have long-term value, may be too sensitive for preservation, or must be destroyed due to data agreements. Deleting files from your computer is not a secure method of data disposal. Contact your IT services, research ethics office, and/or privacy office to find out how you can securely destroy your data. Read more on secure data disposal at [UK Data Service](#).

Sharing and Reuse

What types of data will you share and in what form?

Sharing means making your data available to people outside your project (for more, see [Ghent University](#) and [Iowa State University](#)). Of all the types of data you will create and/or collect (e.g., artwork, field notes), consider which ones you need to share to fulfill institutional or funding policies, the ethical framework of your project, and other requirements and considerations. You generally need participant consent to share data, and your consent form should state how your data will be shared, accessed, and reused.

Your shared data can be in different forms:

- **Raw data** are the original, unaltered data obtained directly from data collection methods (e.g., image files from cameras, audio files from digital recorders). In the context of your project, published data you reuse count as raw data.
- **Processed data** are raw data that have been modified to, for example, prepare for analysis (e.g., removing video that will not be analyzed) or de-identify participants (e.g., blurring faces, cropping, changing voices).
- **Analyzed data** are the results of arts-based, qualitative, or quantitative analyses of processed data, and include artworks, codebooks, themes, texts, diagrams, graphs, charts, and statistical tables.
- **Final data** are copies of raw, processed, or analyzed data you are no longer working with. These copies may have been migrated or transformed from their original file formats into preservation-friendly formats.

Will you need to share some data with restricted access? What restrictions will you apply?

Describe which forms of data (e.g., raw, processed) you will share with restricted access due to confidentiality, privacy, intellectual property, and other legal or ethical considerations and requirements. Remember to inform participants of any restrictions you will implement to protect their privacy and to state them on your consent form. Read more on restricted access at [University of York](#).

Who owns the data you will use in your project? Will the ownership of these data affect their sharing and reuse?

List the owners of the data in your project (i.e., those who hold the intellectual property rights), such as you, collaborators, participants, and the owners of published data you will reuse. Consider how ownership will affect the sharing and reuse of data in your project. For example, existing licenses attached to copyrighted materials that you, collaborators, or participants incorporate into new artwork may prevent its sharing or allow it with conditions, like creator attribution, non-commercial use, and restricted access.

What type of end-user license will you include with your data?

Include a copy of your end-user license here. Licenses set out how others can use your data. Funding agencies and/or data repositories may have end-user license requirements in place; if not, they may be able to guide you in developing a license. Only the intellectual property rights holder(s) of the data you want to share can issue a license, so it is crucial to clarify who holds those rights. Make sure the terms of use of your end-user license fulfill any legal and ethical obligations you have (e.g., consent forms, copyright, data sharing agreements, etc.).

Example: Several types of standard licenses are available to researchers, such as [Creative Commons licenses](#) and [Open Data Commons licenses](#). In most circumstances, it is easier to use a standard license rather than a custom-made one. If you make your data part of the public domain, you should make this explicit by using a license, such as [Creative Commons CC0](#). Read more on data licenses at [Digital Curation Centre](#).

How will researchers, artists, and/or the public find your data?

Researchers can find data through data repositories, word-of-mouth, project websites, academic journals, etc. Sharing your data through a data repository is recommended because it enhances the discoverability of your data in the research community. You can also cite your deposited data the same way you would cite a publication, by including a link in the citation. Read more on data citation at [UK Data Service](#) and [Digital Curation Centre](#).

The best ways to let artists and the public know about your data may not mirror those of researchers. Social media, artistic organizations, and community partners may be options. For more help making your data findable, contact your institution's library or the Portage DMP Coordinator at support@portagenetwork.ca.

Example: Many Canadian postsecondary institutions use Dataverse, a popular data repository platform for survey data and qualitative text data (for more, see [Scholars Portal](#)). It has many capabilities, including open and restricted access, built-in data citations, file versioning, customized terms of use, and assignment of a [digital object identifier](#) (DOI) to datasets. A DOI is a unique, persistent identifier that provides a stable link to your data. Try to choose repositories that assign persistent identifiers. Contact your institution's library or the Portage DMP Coordinator at support@portagenetwork.ca to find out if a local Dataverse is available to you, or for help locating another repository that meets your needs. You can also check out re3data.org, a directory of data repositories that includes arts-specific ones.

Responsibilities and Resources

Who will be responsible for research data management during and after your project? What will their tasks be?

Research data management is often a shared responsibility, which can involve principal investigators, co-investigators, collaborators, graduate students, data repositories, etc. Describe the roles and responsibilities of those who will carry out the activities of your data management plan, whether they are individuals or organizations, and the timeframe of their responsibilities. Consider who can conduct these activities in relation to data management expertise, time commitment, training needed to carry out tasks, and other factors.

If responsibility for research data management needs to be transferred to other individuals or organizations, who will assume responsibility and how?

Expected and unexpected changes to who manages data during your project (e.g., a student graduates, research staff turnover) and after (e.g., retirement, death, agreement with data repository ends) can happen. A succession plan details how research data management responsibilities will transfer to other individuals or organizations. Consider what will happen if the principal investigator, whether you or someone else, leaves the project. In some instances, a co-investigator or the department or division overseeing your project can assume responsibility. Your post-project succession plan can be part of the “living will” for your data.

What resources will you need to implement your data management plan? How much will they cost?

Know what resources you will need for research data management during and after your project and their estimated cost as early as possible. For example, transcription, training for research team members, digitizing artwork, cloud storage, and depositing your data in a repository can all incur costs. Many funding agencies provide financial support for data management, so check what costs they will cover. Read more on costing data management at [Digital Curation Centre](#) and [OpenAIRE](#).

Ethics and Legal Compliance

Are there policies that outline requirements and/or best practices pertaining to your research data management?

Research data management policies can be set by funders, postsecondary institutions, legislation, communities of researchers, and research data management specialists. List policies relevant to managing your data, including those of your institution and the Tri-Agency Research Data Management Policy, if you have SSHRC, CIHR, or NSERC funding. Include URL links to these policies.

What ethical and legal issues will affect your data? How will you address them?

Compliance with privacy and copyright law is a common issue in ABR and may restrict what data you can create, collect, preserve, and share. Familiarity with Canadian copyright law is especially important in ABR (see [Copyright Act of Canada](#), [Canadian Intellectual Property Office](#), [Éducaloi](#), and [Artists' Legal Outreach](#)). Obtaining permissions is key to managing privacy and copyright compliance and will help you select or develop an end-user license.

It is also important to know about ethical and legal issues pertaining to the cultural context(s) in which you do ABR. For example, Indigenous data sovereignty and governance are essential to address in all aspects of research data management in projects with and affecting First Nations, Inuit, and Métis communities and lands (see [FNIGC](#), [ITK](#), and [GIDA](#)), including collective ownership of traditional knowledge and cultural expressions (see [UBC Library](#) and [ISED Canada](#)). Experts at your institution can help you address ethical and legal issues, such as those at your library, privacy office, research ethics office, or copyright office.

Example: Obtaining permissions to create, document, and use artwork in ABR can be complex when, for example, non-participants are depicted in artwork or artwork is co-created or co-owned, made by minors, or derived from other copyrighted work (e.g., collages made of photographs, remixed songs). Consider creating a plan describing how you will obtain permissions for your project. It should include what you want to do (e.g., create derivative artwork, deposit data); who to ask when permission is needed for what you want to do; and, if granted, what the conditions are.

If your project includes sensitive data, how will you ensure they are securely managed and accessible only to approved individuals during your project?

Sensitive data is any data that may negatively impact individuals, organizations, communities, institutions, and businesses if publicly disclosed. Copyrighted artwork, Indigenous cultural expressions, and personal identifiers in artwork or its documentation can be examples of sensitive data in ABR. Your data security measures should be proportional to the sensitivity of your data: the more sensitive your data, the more data security you need. Read more on sensitive data and data security at [Data Storage and Security Tools \(PDF\) by McMaster Research Ethics Board](#), [OpenAIRE](#), and [UK Data Service](#).

Example: Security measures for sensitive data include password protection, encryption, and limiting physical access to storage devices. Sensitive data should never be shared via email or cloud storage services not approved by your research ethics office. Security measures for sensitive non-digital data include storage under lock and key, and logging removal and return of artwork from storage.

**If you will share sensitive data, what issues do you need to address?
How will you address them?**

Sensitive data can still be shared and reused if strategies are in place to protect against unauthorized disclosure and the problems that can rise from it. Obtain the consent of participants to share and reuse sensitive data beyond your project. Your consent form should state how sensitive data will be protected when shared, accessed, and reused. Strategies to reduce the risk of public disclosure are de-identifying data and implementing access restrictions on deposited data. Make sure to address types of sensitive data beyond personal identifiers of participants. Your strategies should align with requirements of your research ethics office, institution, and, if applicable, legal agreements for sharing data. Consult your research ethics office if you need help identifying problems and strategies.

Example: Removing direct and indirect identifiers from data is a common strategy to manage sensitive data. However, some strategies to remove identifiers in images, audio, and video also remove information of value to others (e.g., facial expressions, context, tone of voice). Consult your research ethics office to find out if solutions exist to retain such information. Read more on de-identifying data at [UBC Library](#) and [UK Data Service](#).