

Data Management Plan for People, Places, Policies and Prospects (v. 1.0)

Abstract

Developed for a pan-Canadian and nationally collaborative project, this DMP exemplar serves to document and guide ongoing research exploring housing inequities and vulnerable populations. Data management plays a key role in identifying and addressing issues surrounding the multi-sourced and sensitive data gathered for this project. The “living” nature of this DMP demonstrates the flexibility and value of creating a document that can easily evolve with your project.

Administrative Details

Project Name:

Data Management Plan for People, Places, Policies and Prospects: Affordable Rental Housing for Those in Greatest Need (v. 1.0)

Principal Investigator / Researcher:

Catherine Leviten-Reid

Project Data Contact:

Jasmine Hoover, Cape Breton University

Data Management Plan for People, Places, Policies and Prospects (v. 1.0)

Description:

The project, entitled, “People, Places, Policies and Prospects: Affordable Rental Housing for Those in Greatest Need,” seeks to understand the role and effects of affordable rental housing in the lives of tenants in greatest need. This research is pan-Canadian in scope, involving major community-university research partnerships in and across Cape Breton (via Cape Breton University), Saskatoon (via the University of Saskatchewan) and Ottawa (via Carleton University). Collaborators, co-applicants and partner organizations are also involved from New Brunswick, British Columbia, Québec and Illinois, while some partner organizations have national mandates. The project also features an international advisory committee, with current representation from the United Kingdom and the United States. This plan is drafted in compliance with the [Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans \(TCPS2\)](#) and the [Tri-Agency Statement on Principles of Digital Data Management](#) and was developed using the [Canadian Association of Research Libraries’ Portage Data Management Plan Assistant](#).

It can be helpful to the reader to describe any relevant policies and resources you've used to guide the development of your DMP.

Institution:

Cape Breton University

Data Management Plan for People, Places, Policies and Prospects (v. 1.0)

Data Collection

What types of data will you collect, create, link to, acquire and/or record?

Data collected during our projects may include, but are not limited to, those gathered from surveys, in-depth interviews, focus groups, community conversations and arts-based methods such as photography. This means we will potentially generate numeric, audio, image, video and text-based data.

What file formats will your data be collected in? Will these formats allow for data re-use, sharing and long-term access to the data?

This research project is collecting a variety of types of data. Examples of these include XML¹ and CSV² for databases and spreadsheets, JPG³ or TIFF⁴ files for images, MP3⁵ files for sound and TXT⁶ for text. Each of these file types are non-proprietary, ensuring ease and flexibility of reuse.

Providing definitions for acronyms in each new section or on each page prevents readers unfamiliar with the terminology from having to revisit previous sections.

¹ Extensible Markup Language (.xml)

² Comma Separated Values (.csv)

³ Joint Photographic Experts Group (.jpeg)

⁴ Tagged Image File Format (.tiff)

⁵ Moving Picture Experts Group Layer-3 Audio (.mp3)

⁶ Text (.txt)

Data Management Plan for People, Places, Policies and Prospects (v. 1.0)

What conventions and procedures will you use to structure, name and version-control your files to help you and others better understand how your data are organized?

All regions will use a conventional naming standard. File names should include the grant name (in shortened form), a summary of the file's content, the region and the date (in the format YYYY/MM/DD). An example is the following:

prospects_interviewguide_ON_20200617.

Document versions should be named sequentially (with file names ending in v1, v2 etc.). An example is the following:

prospects_interviewguide_ON_20200617_v1.

In order for data to be interoperable, data should be saved in non-proprietary software formats which are accessible to others (so open file formats). Examples of these include XML¹ and CSV² for databases and spreadsheets, JPG³ or TIFF⁴ files for images, MP3⁵ files for sound and TXT⁶ for text.

Providing examples of controlled file naming structures helps demonstrate more specifically how you'll keep your data organized and understandable.

¹ Extensible Markup Language (.xml)

² Comma Separated Values (.csv)

³ Joint Photographic Experts Group (.jpeg)

⁴ Tagged Image File Format (.tiff)

⁵ Moving Picture Experts Group Layer-3 Audio (.mp3)

⁶ Text (.txt)

Data Management Plan for People, Places, Policies and Prospects (v. 1.0)

Documentation and Metadata

What documentation will be needed for the data to be read and interpreted correctly in the future?

In order for data to be potentially reused, all data files should include a description of team members responsible for creating the data, how the data were collected, the code book (if involving survey data), the interview guide (if involving qualitative data), any issues affecting data quality and other pertinent background information which allows the content to be easily understood by others. All files containing spreadsheets must include column names which are easily interpreted, even though they will be defined in a code book.

How will you make sure that documentation is created or captured consistently throughout your project?

Team researchers engaged in data analysis using software will create logs and syntax files to ensure that the steps leading to the final results are documented and saved. No identifying information of participants may be included in data files. Metadata must also include the grant name and funders (SSHRC¹ and CMHC²).

If you are using a metadata standard and/or tools to document and describe your data, please list here.

Since these data files will be deposited in the [Scholars Portal Cape Breton University Dataverse](#), the Data Documentation Initiative (DDI³) metadata standard will be applied.

¹ [Social Sciences and Humanities Research Council](#)

² [Canadian Mortgage and Housing Corporation](#)

³ [Data Documentation Initiative](#)

Data Management Plan for People, Places, Policies and Prospects (v. 1.0)

Storage and Backup

What are the anticipated storage requirements for your project, in terms of storage space (in megabytes, gigabytes, terabytes, etc.) and the length of time you will be storing it?

Storage space is anticipated to be approximately 100GB¹. The data will be stored for 5 years locally, with a permanent copy held in the [Scholars Portal Cape Breton University Dataverse](#).

How and where will your data be stored and backed up during your research project?

The 3-2-1 backup rule will be followed for data storage and backup. This means that team members will create three copies of all data files, to be stored on two different types of media, with one copy kept in an off-site location. Examples of different media types include those which are removable (USB²), fixed (such as a hard drive on a laptop) and networked (such as cloud-based servers).

Team members can best decide how to back up their data, as long as they follow the 3-2-1 rule above and that it aligns with any institutional and/or ethical requirements. However, all team members will upload their files to a cloud-based server located in Canada, to be identified by the project lead. Sensitive files are to be encrypted.

When following a specific practice or protocol (like 3-2-1 backup and storage), it is helpful to provide a brief explanation of how it will be carried out. Not all readers will be familiar with any given practice, protocol, or guideline.

How will the research team and other collaborators access, modify, and contribute data throughout the project?

Since the research team is spread across Canada, cloud servers with encryption capabilities are being used to collaborate. Locally, [OneDrive](#) is used to store, share, and work with data.

¹ Gigabytes

² Universal Serial Bus

Data Management Plan for People, Places, Policies and Prospects (v. 1.0)

Microsoft OneDrive is a cloud-based file hosting platform that works synchronously within the Microsoft Office Suite of desktop and web applications.

Preservation

Where will you deposit your data for long-term preservation and access at the end of your research project?

Data collected during this grant should normally be indexed/archived on the [Scholars Portal Cape Breton University Dataverse](#) in accordance with the SSHRC¹ policy on data sharing. To comply with this policy, team members will do so within a two-year period after data have been collected for their particular research project. However, this will not apply to data deemed sensitive by researchers or their Research Ethics Board (an example might include qualitative data in which research participants describe difficult past housing experiences).

Indicate how you will ensure your data is preservation ready. Consider preservation-friendly file formats, ensuring file integrity, anonymization and de-identification, inclusion of supporting documentation.

In order for data to be potentially reused, all data files should include a description of team members responsible for creating the data, how the data were collected, the code book (if involving survey data), the interview guide (if involving qualitative data), any issues affecting data quality and other pertinent background information which allows the content to be easily understood by others. All files containing spreadsheets must include column names which are easily interpreted, even though they will be defined in a code book. Team researchers engaged in data analysis using software will create logs and syntax files to ensure that the steps leading to the final results are documented and saved. No identifying information of participants may be included in data files. Metadata must also include the grant name and funders (SSHRC¹ and CMHC²).

¹ [Social Sciences and Humanities Research Council](#)

² [Canadian Mortgage and Housing Corporation](#)

Data Management Plan for People, Places, Policies and Prospects (v. 1.0)

Sharing and Reuse

What data will you be sharing and in what form? (e.g. raw, processed, analyzed, final).

The analyzed, de-identified data set or datasets will be put under mediated access in the [Scholars Portal Cape Breton University Dataverse](#). Users will be required to request access to the data for reuse.

Have you considered what type of end-user license to include with your data?

Access to the data will be mediated through Dataverse. Requests will be evaluated by the PI and/or a backup member identified on the research team. Terms of access and use will be determined by the PI in consultation with the research team to ensure appropriate use of the data.

What steps will be taken to help the research community know that your data exists?

Data deposited in [Dataverse](#) will be assigned a Digital Object Identifier (DOI¹), a unique and persistent code that can be used by others to locate and access these data. Metadata is harvested by the FRDR², a Canada wide research repository, where data can be discovered, and then shared, at a national level. We will also link our dataset to the publications arising from this study.

¹ [Digital Object Identifier](#)

² [Federated Research Data Repository](#)

Data Management Plan for People, Places, Policies and Prospects (v. 1.0)

Responsibilities and Resources

Identify who will be responsible for managing this project's data during and after the project and the major data management tasks for which they will be responsible.

The project lead, Dr. Catherine Leviten-Reid, is responsible for ensuring team members follow this data management plan. University-based team members are responsible for informing their student researchers/HQPs¹ of this plan. If two or more team members are working jointly on a research project, they will determine, at the outset of their work, which member is responsible for implementing the data management practices in this plan.

How will responsibilities for managing data activities be handled if substantive changes happen in the personnel overseeing the project's data, including a change of Principal Investigator?

A backup member of the research team will be identified.

What resources will you require to implement your data management plan? What do you estimate the overall cost for data management to be?

Cape Breton University Library offers [Dataverse](#) services for the university at no cost to researchers. Storage of data in external drives, and other related expenses, could cost approximately \$200.00-\$300.00.

¹ Highly Qualified Personnel

Data Management Plan for People, Places, Policies and Prospects (v. 1.0)

Ethics and Legal Compliance

If your research project includes sensitive data, how will you ensure that it is securely managed and accessible only to approved members of the project?

Some of our data may be sensitive data and will be placed on secure cloud servers, where it will be encrypted. Only analyzed, de-identified data will be made available once the project is complete.

If applicable, what strategies will you undertake to address secondary uses of sensitive data?

No sensitive data will be shared. De-identified and non sensitive data will be made available on the [Scholars Portal Cape Breton University Dataverse](#). Any sensitive data will be stored on secure servers for 5 years.

How will you manage legal, ethical, and intellectual property issues?

Research has been approved by the Research Ethics committees at the various institutions involved in the project. Participants are also required to sign the informed consent agreement. By mediating data requests and determining their own terms of access, researchers maintain their rights to the intellectual property.



Attribution-NonCommercial 4.0 International (CC BY-NC 4.0)
Portage Network | portage@carl-abrc.ca | portagenetwork.ca