Data Management Planning 101

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Canadian Data Curation Forum
McMaster University

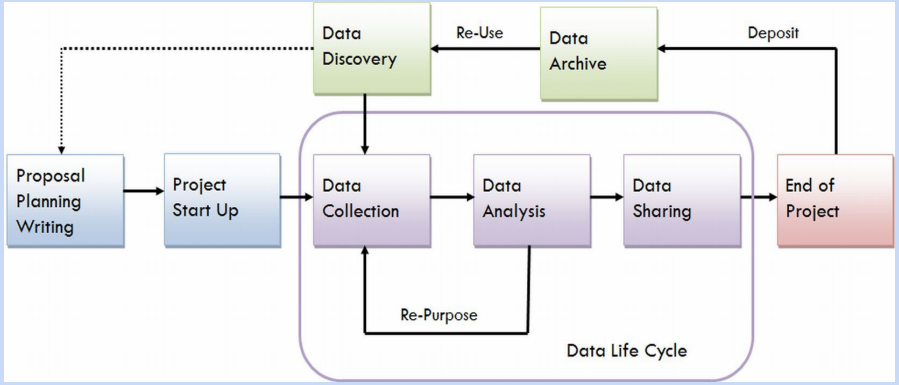
October 16, 2019

What *is* a data management plan?

A DMP:

- Is a formal document clearly articulating the strategies and tools you will implement to effectively manage your data
- Speaks to the management of data both ***during*** the active phases of your research and ***after*** the completion of the research project.

A DMP helps articulate & guide data management *throughout* your research project!



FAIR Principles

FAIR is a set of guiding principles focused towards making data:

- **Findable** data are assigned a unique persistent identifier (e.g., DOI) & are indexed in a publically accessible repository or data portal
- **Accessible** data are easily retrieved by both humans/machines
- **Interoperable** data utilize such things as a controlled vocabulary, common programming language, and metadata standards allowing for machine actionability
- **Reusable** data have metadata and data that are rich at both study & variable levels, compliant with 'FAI', include license agreements and are citable

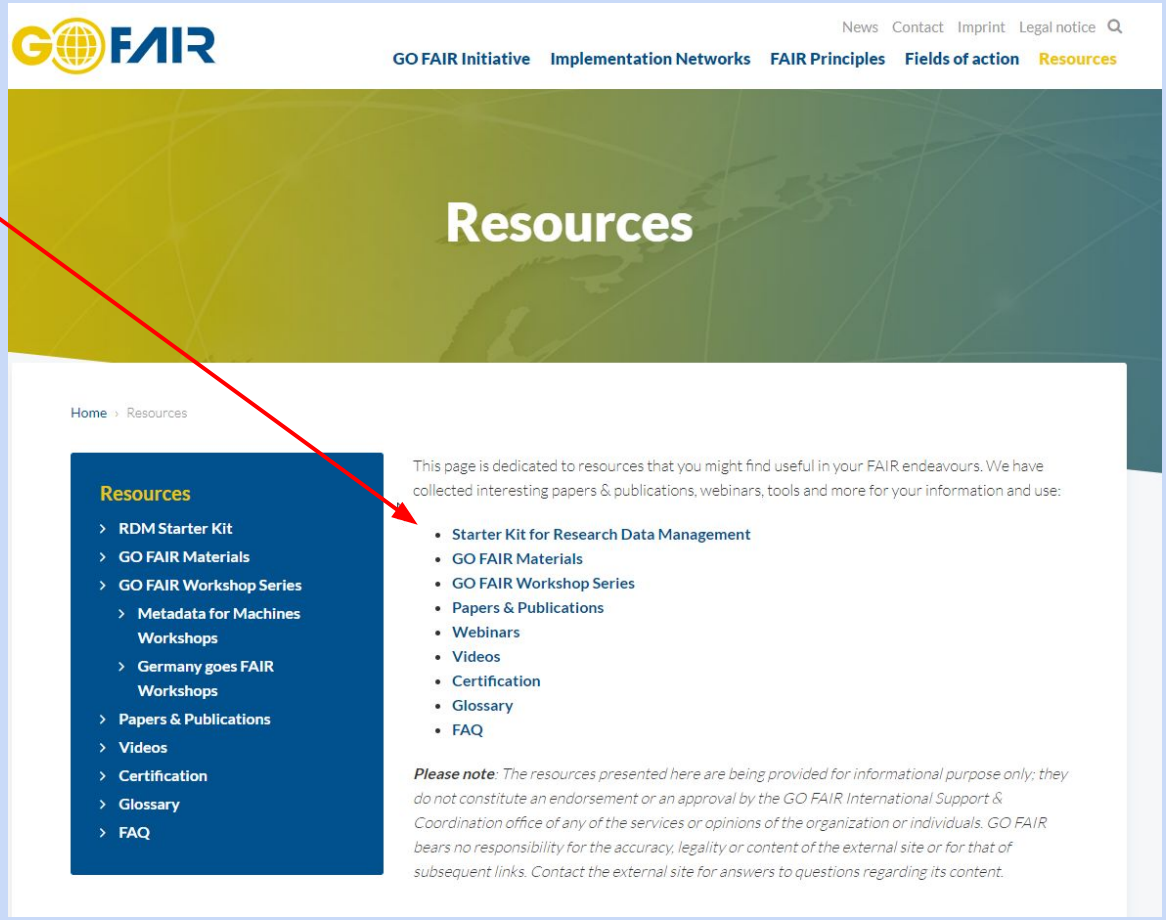
*Key Reading:

Wilkinson, M. D. *et al.* The FAIR Guiding Principles for scientific data management and stewardship. *Sci. Data*3:160018 doi: 10.1038/sdata.2016.18 (2016).

FAIR Principles: Key Resource

go-fair.org (https://www.go-fair.org/fair-principles/)

- Initiatives
- Implementation Networks
- Detailed information across the FAIR principles
- Fields of Action
- Resources!



OCAP Principles

The First Nation Principles of OCAP are a set of standards that establish how First Nations data should be collected, protected, used or shared:

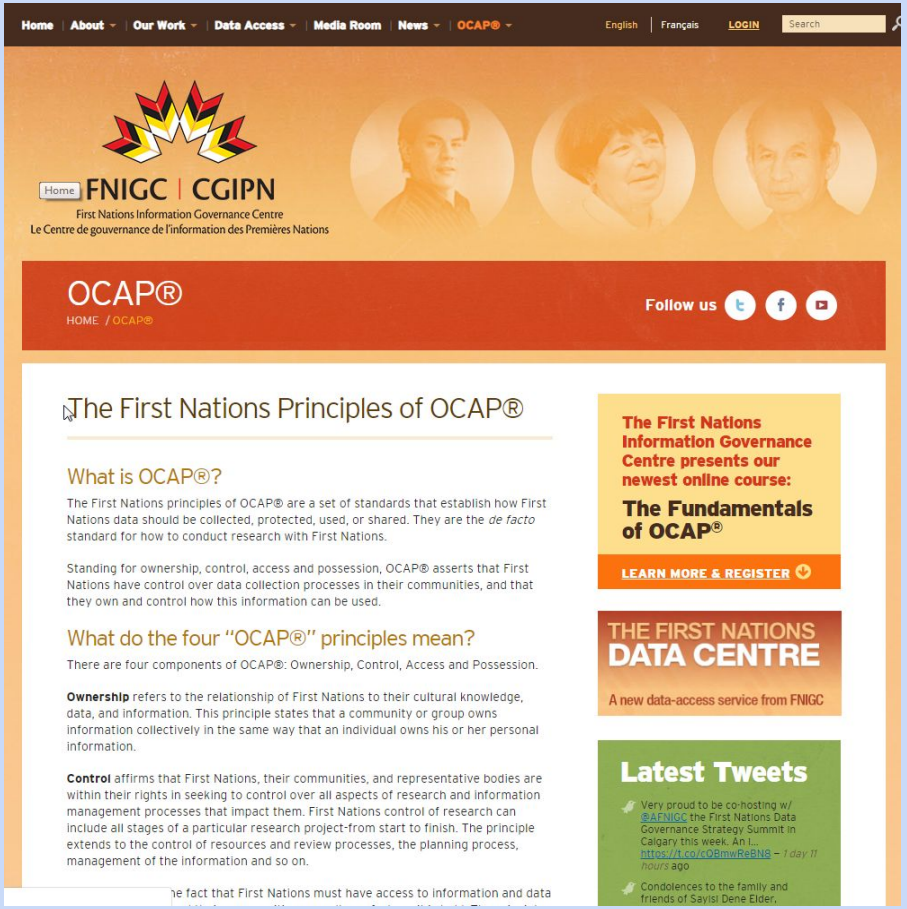
- **Ownership:** refers to the relationship of First Nations to their cultural knowledge, data & information - a **community/group collectively owns information** in the same way that an individual owns his/her personal information
- **Control:** affirms that **First Nations communities have rights in seeking control over all aspects of research** - from start to finish - that impact them. This extends to control of resources and review processes and management of information.
- **Access:** **First Nations must have access to information and data about themselves and their communities** regardless of where it is held, and have the **right to manage and make decisions** regarding access to their collective information.
- **Possession:** Refers to the physical control of data - the **mechanism by which ownership can be asserted and protected.**

"OCAP® is a registered trademark of the First Nations Information Governance Centre (FNIGC)"
www.FNIGC.ca/OCAP

OCAP Principles: Key Resource

First Nations Information Governance Centre
(https://www.FNIGC.ca/)

- Fundamentals of OCAP online training program
- FNIGC data online
- First Nations Data Centre (data by request)
- OCAP certification for research projects (coming soon!)
- First Nations surveys (i.e., regional health, early childhood, education, labour, oral health)
- FNIGC online library (coming soon!)



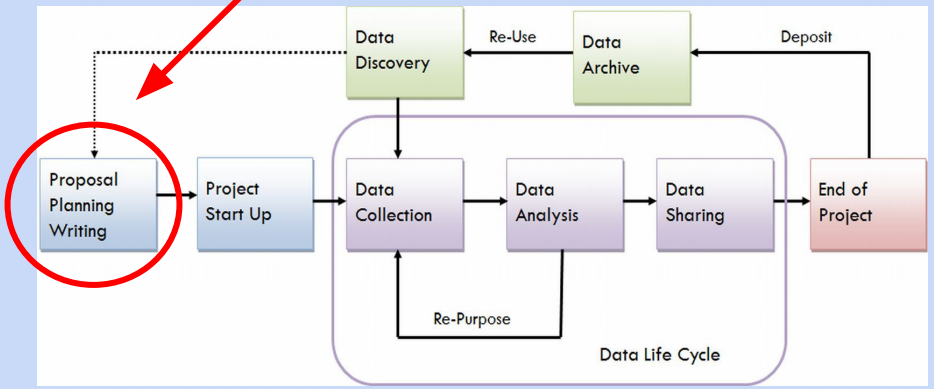
Why are DMPs important?

DMPs help you to:

- **Set out consistent data management strategies** *prior* to starting research
- **Identify strengths & weaknesses** in current practices and to integrate effective data management practices into your research
- **Prepare data** for future reuse, preservation and sharing
- **Meet requirements** of both funders and institutions
- **Reduce the overall cost of research** by increasing project efficiencies

When should I start creating a DMP?

Like Jeff said, a DMP should be developed as early in the research process as possible!



Every research project should ***begin*** with the creation of a DMP, as it will be used to guide the research process.

Remember: A DMP is a *living document* that can be updated throughout the research process

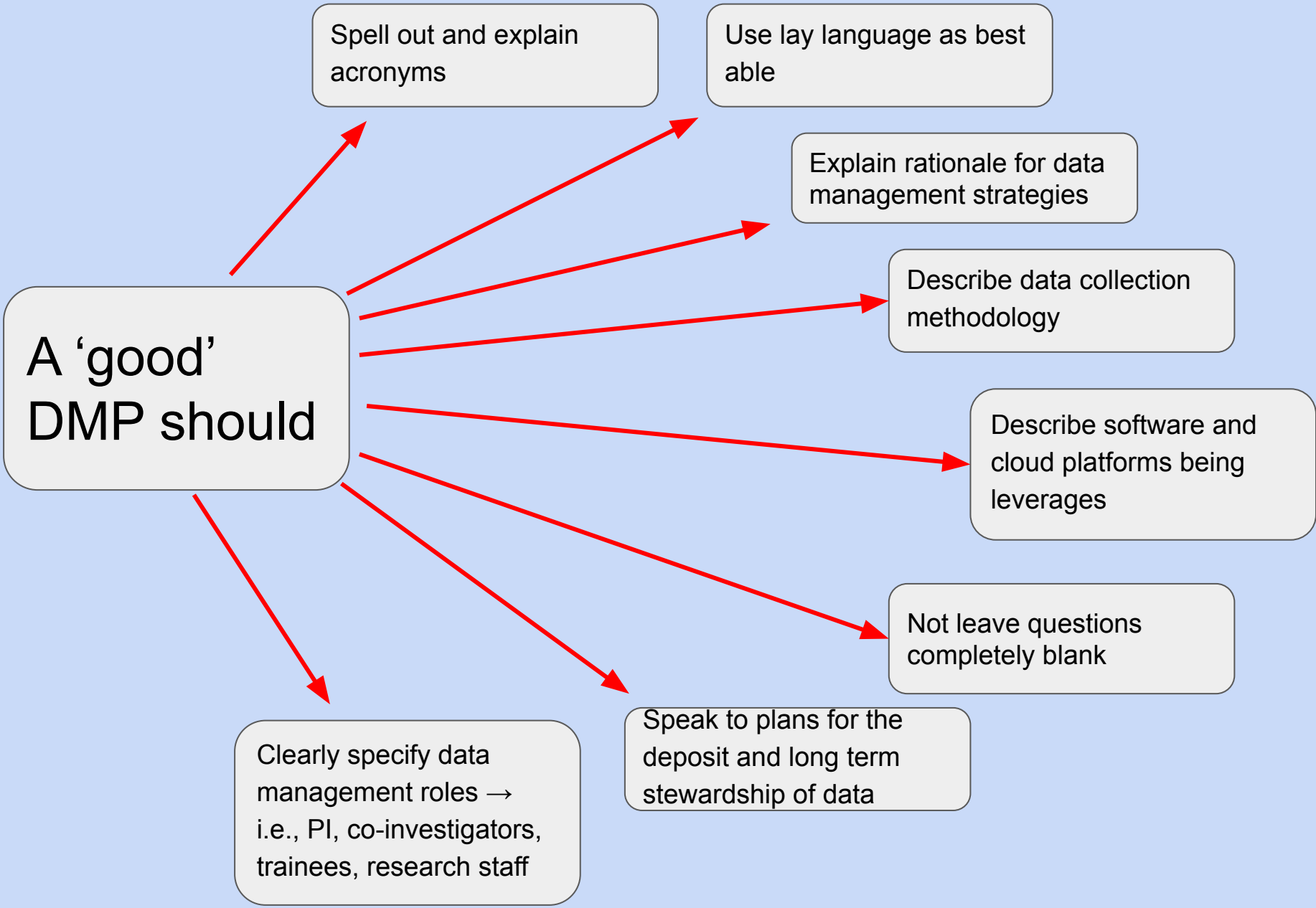
What are the key components of a DMP?

A DMP should include information relating to:

- Data collection
- Storage and backup
- Preservation
- Sharing
- Responsibilities and resources
- Ethics and legal compliance

Don’t forget about documentation and metadata!!

What makes a ‘good’ DMP?



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SERVICES PARTAGÉS POUR LES DONNÉES DE RECHERCHE
SHARED STEWARDSHIP OF RESEARCH DATA

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Training Resources | Communities of Practice | How to Manage Your Data | Infrastructure Platforms | Network of Experts | About Portage

THE PORTAGE NETWORK is dedicated to the shared stewardship of research data in Canada through:

- Developing a national research data culture
- Fostering a community of practice for research data
- Building national research data services and infrastructure

Launched in 2015 by the Canadian Association of Research Libraries, Portage works within the library community to coordinate expertise, services, and technology in research data management, seeking to collaborate with other research data management stakeholders.

Research data culture represents widely shared values and principles for digital data management.

A community of practice for research data consists of stakeholders working collaboratively to ensure data are accessible to address complex research issues.

Research data management activities span sectors, domains, and jurisdictions, necessitating nationally coordinated research data management services and infrastructure.

> Read more

DMP Assistant

Sign In

If you have an existing account with DMP Assistant or previous version of DMP Builder.

Sign Up

New to DMP Assistant? Sign up today.

FRDR DFDR
FEDERATED RESEARCH DATA REPOSITORY
DÉPÔT FÉDÉRÉ DE DONNÉES DE RECHERCHE

NEWS

JULY 31, 2019

Portage Progress Report for the Period of April – June 2019

JULY 31, 2019

DMP Assistant Key Features

- Supports cross institutional research collaboration
- Freely available to end users
- Web-based, bilingual tool
- Endorsed by the Tri-Agencies
- Guidance & Examples
- Can have multiple DMPs
- Shared access - co-owner, editor, or read-only
- Exportable (e.g., pdf, text, MSWord)
- Living document - modifiable when needed

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Shared stewardship of research data

Version française

Home | About | Help

DMP Assistant is a bilingual tool for preparing data management plans (DMPs). The tool follows best practices in data stewardship and walks researchers step-by-step through key questions about data management.

Step 1 Sign up with DMP Assistant

Step 2 Sign in and select a template under Organizations. The Portage template is the default.

Step 3 Answer the questions that are relevant to your work. Guidance and examples are provided.

Step 4 Revisit the tool throughout your research to review or revise your answers.

Sign in +

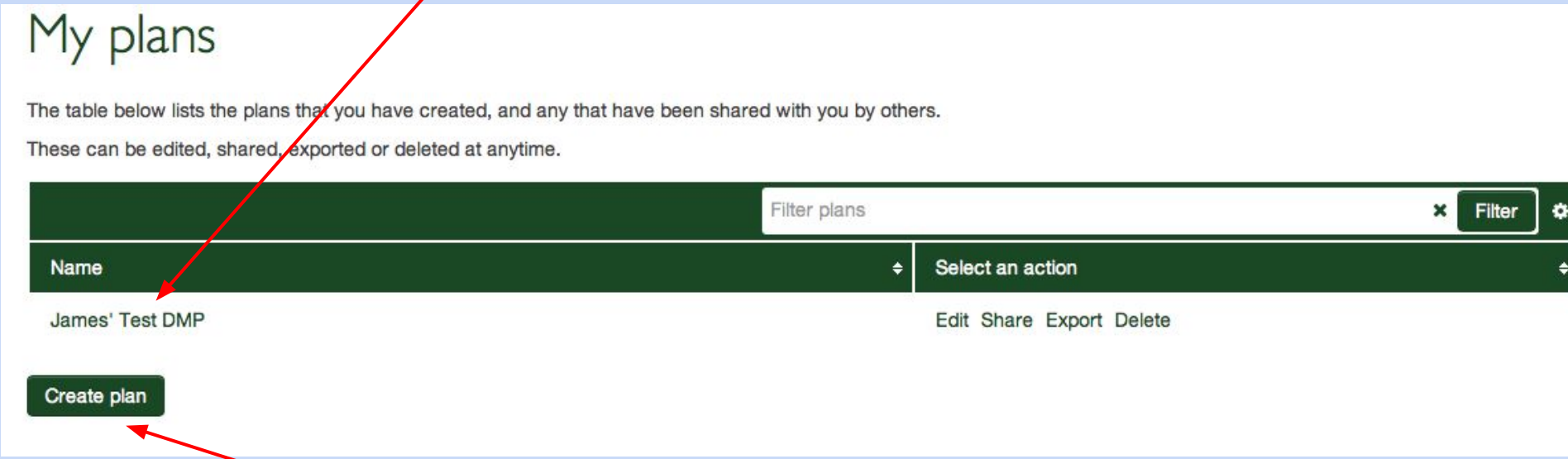
If you have an existing account with DMP Assistant or previous version of DMP Builder.

Sign up +

New to DMP Assistant? Sign up today.

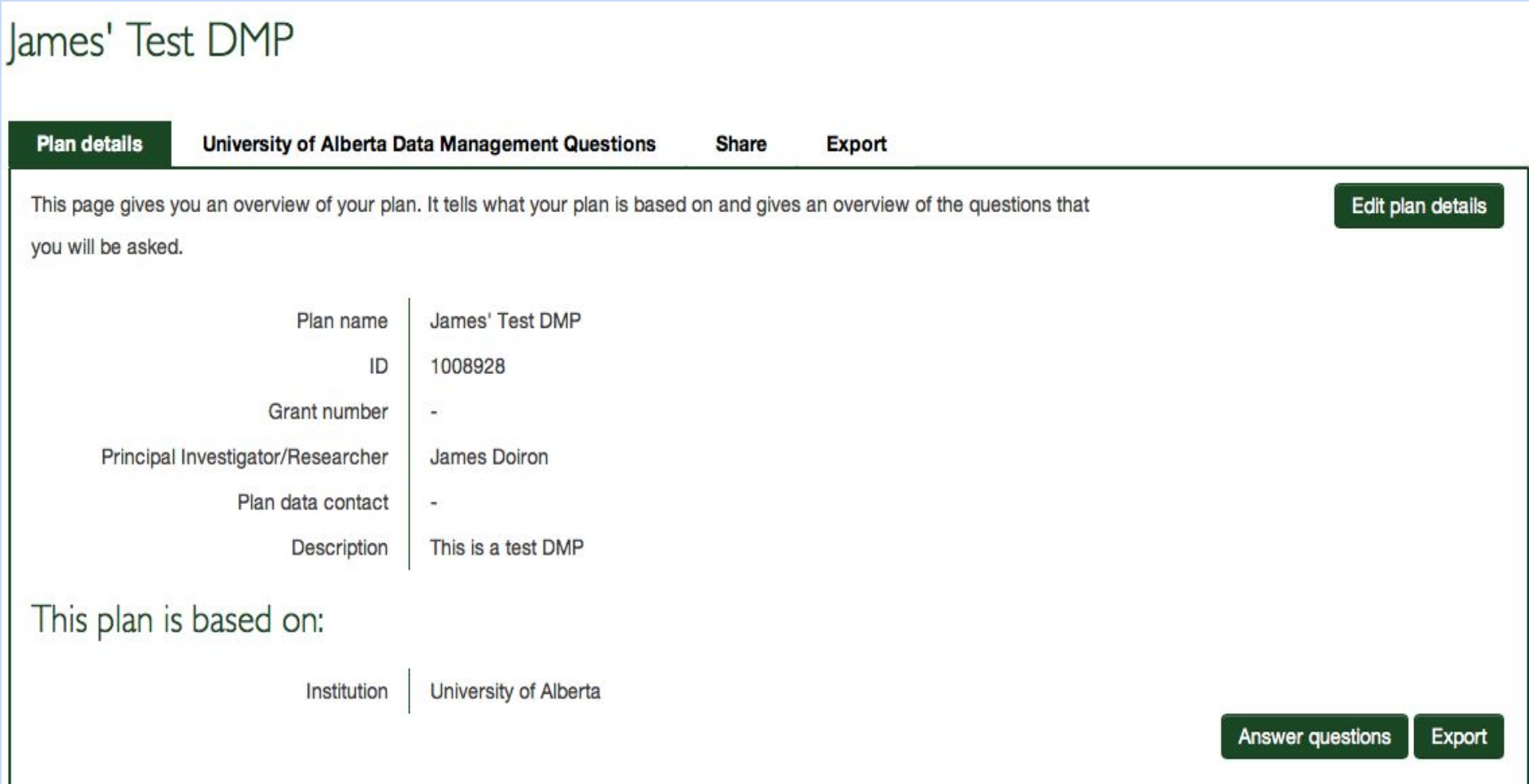
Please note that we are currently working on single sign-in authentication. For now, please create a new DMP Assistant account. You will have the option to link your DMP Assistant account to your campus ID when that feature becomes available.

Upon signing in, researchers can either access an existing DMP…..

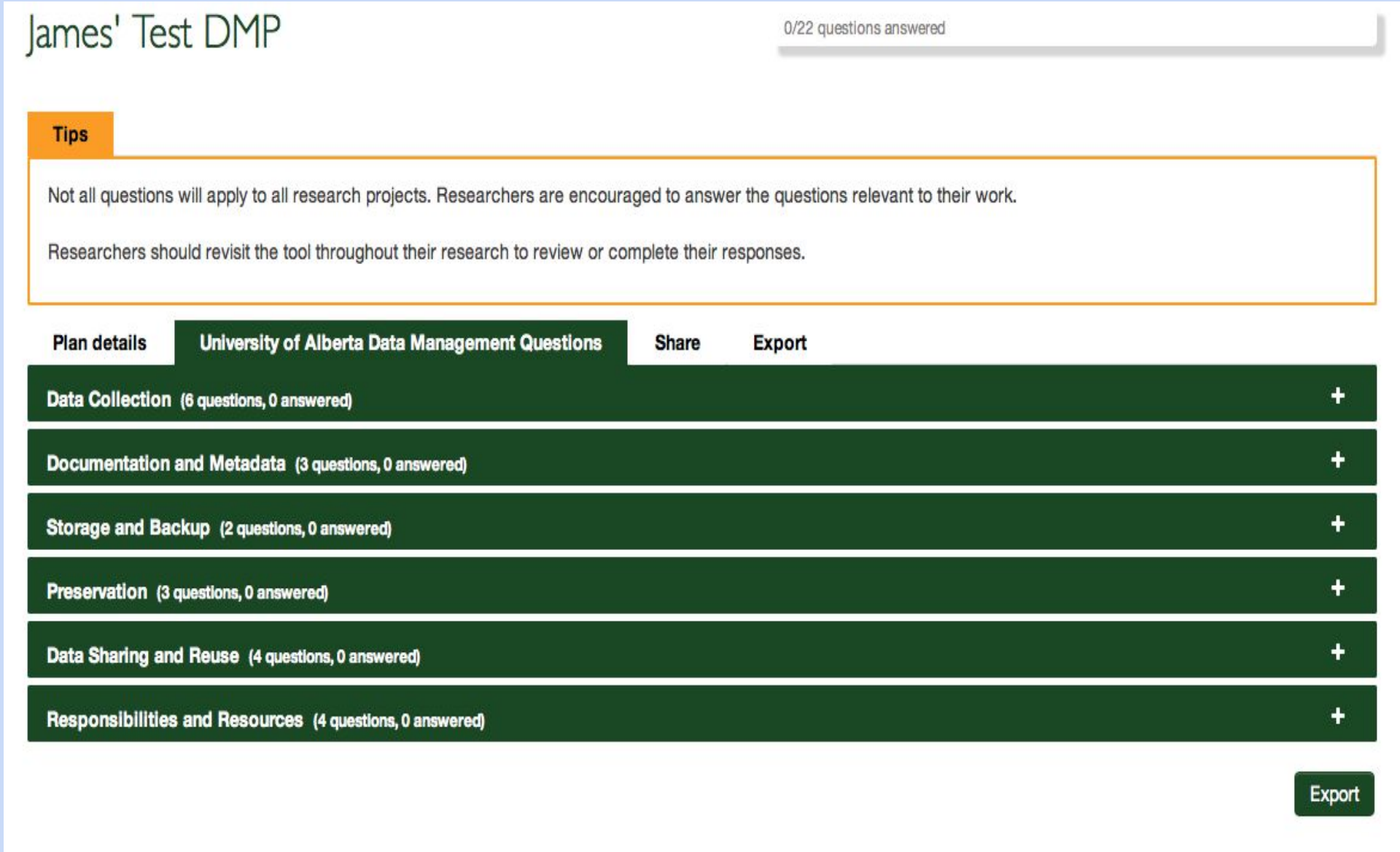


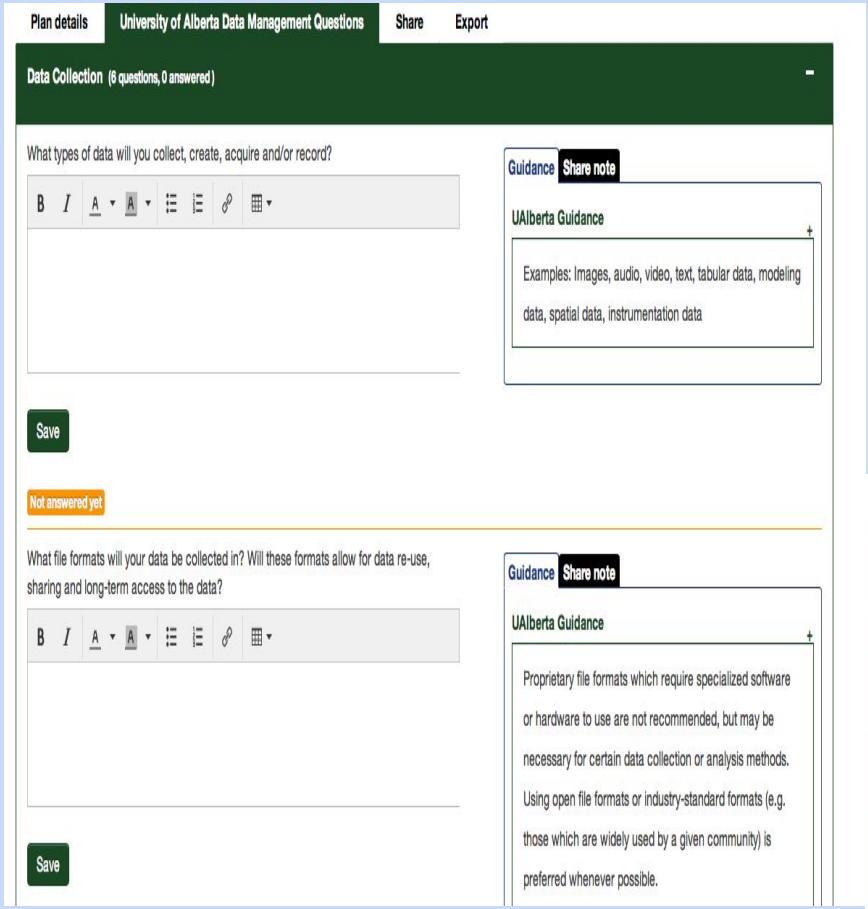
…..or create a new one

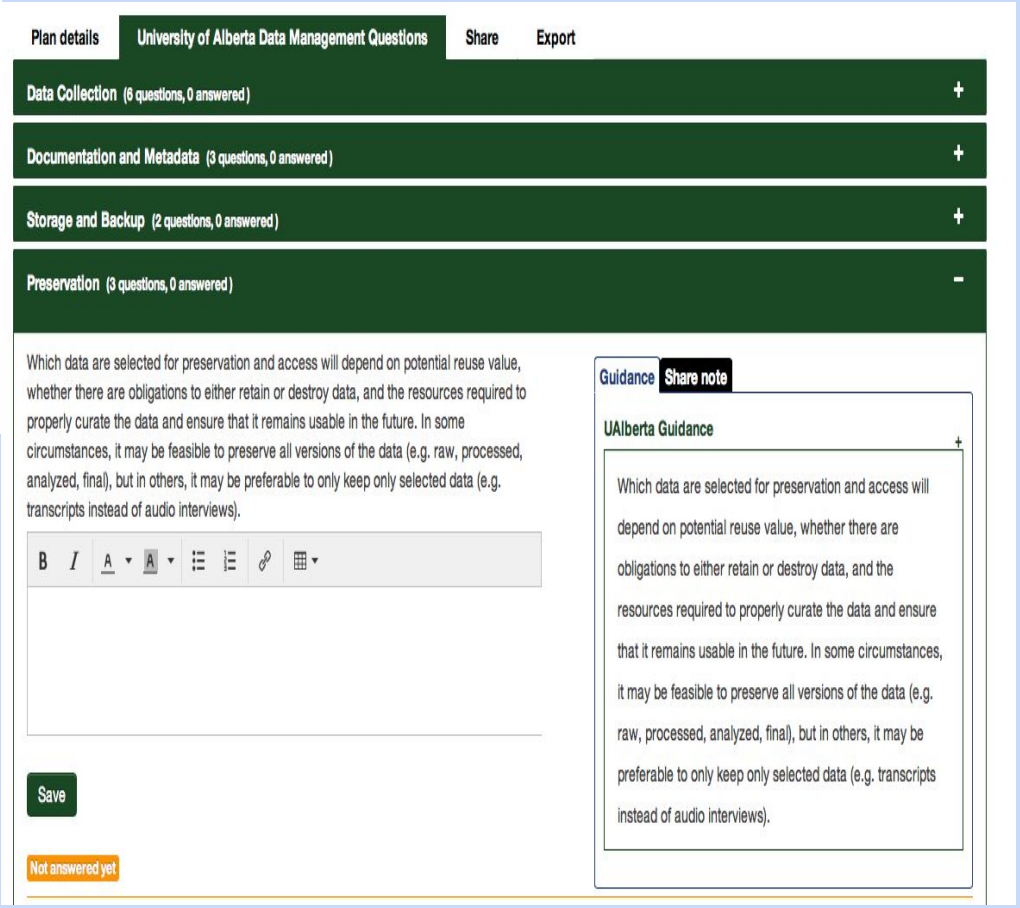
Each DMP has study level information associated with it

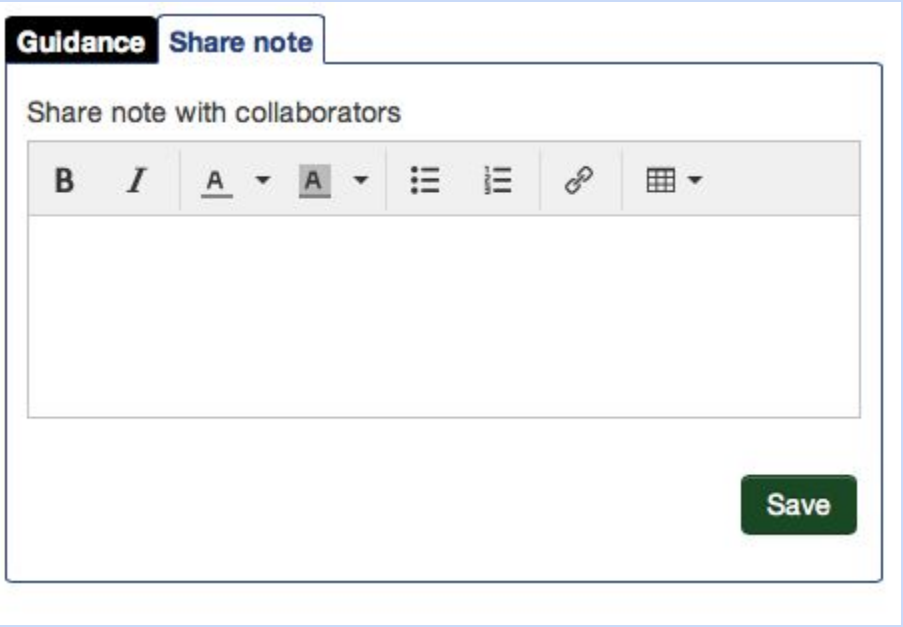


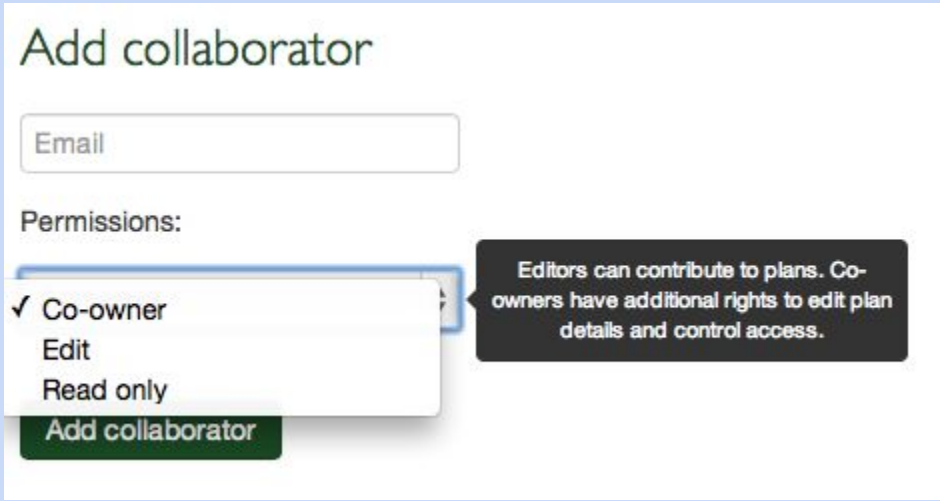
Researchers can choose to answer questions within any given section at any time

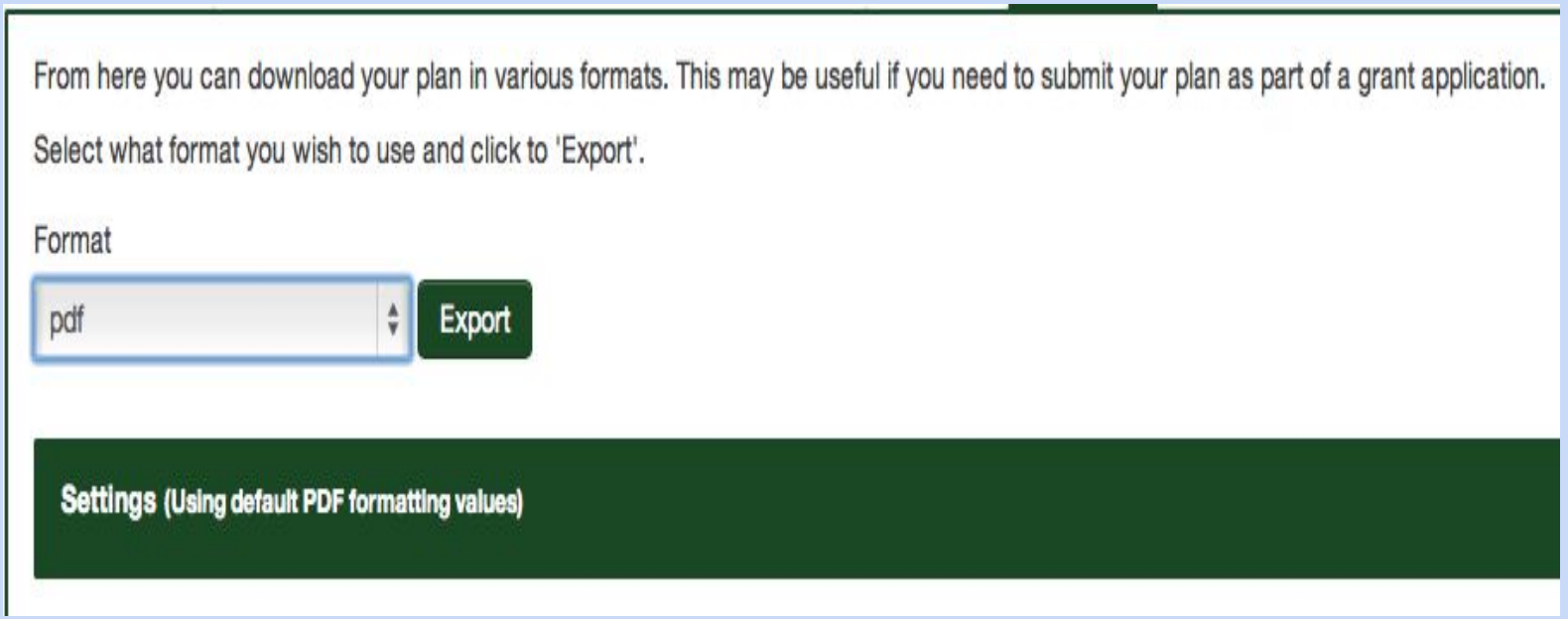



Plan details
University of Alberta Data Management Questions
Share
Export
Data Collection (6 questions, 0 answered)
What types of data will you collect, create, acquire and/or record?
Guidance
Share note
UAlberta Guidance
Examples: Images, audio, video, text, tabular data, modeling data, spatial data, instrumentation data
Save
Not answered yet
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?
Guidance
Share note
UAlberta Guidance
Proprietary file formats which require specialized software or hardware to use are not recommended, but may be necessary for certain data collection or analysis methods. Using open file formats or industry-standard formats (e.g. those which are widely used by a given community) is preferred whenever possible.
Save


Plan details
University of Alberta Data Management Questions
Share
Export
Data Collection (6 questions, 0 answered)
Documentation and Metadata (3 questions, 0 answered)
Storage and Backup (2 questions, 0 answered)
Preservation (3 questions, 0 answered)
Which data are selected for preservation and access will depend on potential reuse value, whether there are obligations to either retain or destroy data, and the resources required to properly curate the data and ensure that it remains usable in the future. In some circumstances, it may be feasible to preserve all versions of the data (e.g. raw, processed, analyzed, final), but in others, it may be preferable to only keep only selected data (e.g. transcripts instead of audio interviews).
Guidance
Share note
UAlberta Guidance
Which data are selected for preservation and access will depend on potential reuse value, whether there are obligations to either retain or destroy data, and the resources required to properly curate the data and ensure that it remains usable in the future. In some circumstances, it may be feasible to preserve all versions of the data (e.g. raw, processed, analyzed, final), but in others, it may be preferable to only keep only selected data (e.g. transcripts instead of audio interviews).
Save
Not answered yet


Guidance
Share note
Share note with collaborators
Save


Add collaborator
Email
Permissions:
Co-owner
Edit
Read only
Editors can contribute to plans. Co-owners have additional rights to edit plan details and control access.
Add collaborator


From here you can download your plan in various formats. This may be useful if you need to submit your plan as part of a grant application.
Select what format you wish to use and click to 'Export'.
Format
pdf
Export
Settings (Using default PDF formatting values)

Short tutorial video

https://libcasts.library.dal.ca/Portage/DMP_Assistant/

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LIBRARIES

Discussion

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University of Alberta Libraries

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