



UNIVERSITY OF ALBERTA
LIBRARIES

Research Data Management at the University of Alberta

Geoff Harder, Associate University Librarian

Strategic Workshop for Research Data Management

Sponsored by Research Data Canada and University of Alberta

Council Chambers, University of Alberta

November 17, 2015

Background

— — —

Foundation:

Research Data Centre
Data Library

Research data expert(s)

Extensive network of partnerships and contacts

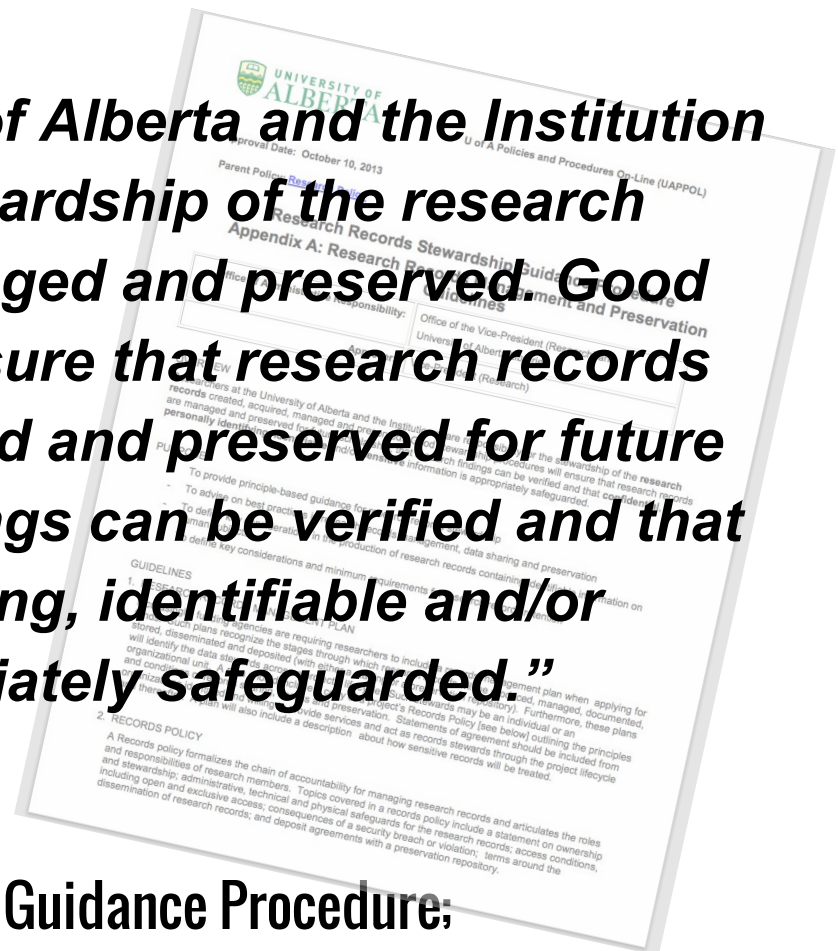
RDM: Moving from abstract problems to concrete solutions



- Where we are ➡ where we want (or need) to be
- **Policies, infrastructure** and **people** will help us get there
- A **culture of data stewardship** will indicate we have arrived

“Researchers at the University of Alberta and the Institution share responsibility for the stewardship of the research records created, acquired, managed and preserved. Good stewardship procedures will ensure that research records [incl. research data] are managed and preserved for future scholarship, that research findings can be verified and that confidential, personally identifying, identifiable and/or sensitive information is appropriately safeguarded.”

Policy: Research Records Stewardship Guidance Procedure;
Appendix A: Research Records Management and Preservation Guidelines (2013)



Infrastructure

To support:

Organization

Access

Sharing
(Credit)

Archiving

The screenshot shows the University of Alberta Libraries website. At the top is the University of Alberta logo and navigation links: Find a Person, ONEcard, Bear Tracks, Maps, Email & Apps, eClass, and UofA. Below this is a green header with 'LIBRARIES' and links for 'Ask Us' (chat, text, email, phone) and 'Version française'. A secondary navigation bar lists: DATABASES, JOURNALS, SUBJECTS, LIBRARIES, MY ACCOUNT, SERVICES, and HOURS. The main content area is titled 'RESEARCH DATA MANAGEMENT' and features four colored boxes: 'Organize my data' (red), 'Share my data' (green), 'Access existing data' (blue), and 'Archive my data' (purple). To the right of these boxes is a sidebar with 'research data management week 2015' (#uardmw15), 'DMP ASSISTANT', 'DATAVERSE', and a 'Tweets' section featuring a tweet from @smallmultiples about the Nature Index project. At the bottom, there are four columns of links: People/Policies, Gifts and Donations/Our Collection, Copyright/Employment, and Contact Us/Search this Site. The footer includes a Creative Commons license logo and text: 'This work is subject to a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International license. For exceptions, see the Library Re-use and Attribution Statement.'

UNIVERSITY OF ALBERTA

Find a Person | ONEcard | Bear Tracks | Maps | Email & Apps | eClass | UofA

LIBRARIES

Ask Us
chat - text - email - phone | Version française

DATABASES | JOURNALS | SUBJECTS | LIBRARIES | MY ACCOUNT | SERVICES | HOURS

RESEARCH DATA MANAGEMENT

Organize my data

How to prepare a data management plan & protect your data

Share my data

Why you would share, data sharing tools, metadata & how to get credit

Access existing data

How to locate data and access data tools, terms & citations

Archive my data

How to find a repository, prepare your data & submit your data

Good data management is informed by funder and institutional policy and encompasses the full data lifecycle including collection, analysis, dissemination and potential reuse.

research data management week 2015
[#uardmw15](#)

DMP ASSISTANT

DATAVERSE

Tweets

Small Multiples
@smallmultiples
New project for Nature Index - Explore how the world's scientists collaborate natureindex.com/country-output... #NiCollab15 pic.twitter.com/2bOkw1Q37z

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Policies

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Tools: DMP Assistant (formerly DMP Builder)



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.

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.

- 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.



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Grant Assist Program (Health Sciences)

About Us

Changes to CIHR's Open Programs

Feedback Processes

Workshops

Archived Workshops

Budget

Canadian Common CV

Finding Funding

Foundation Competition

Grant Application Process

Letters of Support

Non-OQOP Funding Opportunities

Peer Review Committee Selection

Proposal Writing

SPOR SUPPORT Unit

Data Management Plans

Bibliometrics & Librarian Support

Home > Workshops > Archived Workshops > Data Management Plans

Data Management Plans

The Value of a Data Management Plan to Your Research: get a head start! This workshop discussed how a management plan can assist you in getting a head start in your next research project and learn about DMP Management Plan (DMP) Builder, an online Web-tool for drafting such plans. Increasingly funding agencies are expecting researchers to have a data management plan when they submit their grant applications. This workshop reviewed the steps in preparing a plan and how you can get the most out of it. (Date Delivered: March 2014)

A web application for data management planning

C. Humphrey, D. Storie, N. MacGregor, N. Roun, T. Jenkins, T. Chatterley, W. Shi, K. Roark, U. Gassim, G. Harder
University of Alberta Libraries, and Computer Library, University of Alberta

Introduction

There is a growing call for researchers to prepare data management plans (DMPs) for their research projects. DMPs describe how research data will be handled throughout all stages of the research lifecycle, including data collection, analysis, dissemination, and preservation.

For most users, the tool provides an integrated, personalized data management plan that may also be used to track the progress of a research project. It also outlines how data will be handled after a research project has concluded.

It is becoming more common for funding agencies to ask for DMPs as part of grant applications, especially in the U.S., and the tool can be used at the individual or organizational level (e.g., to address institutional or departmental needs for research data management).

About the application:

To meet the needs of researchers in Alberta, the tool was developed by the University of Alberta Libraries and the Computer Library, University of Alberta.



Using the DMP Tool

After creating an account and logging in, users will be able to create a new plan. This involves a few steps: creating a new plan, selecting a template, and answering questions about the plan.

Questions are grouped into sections (e.g., Description and Metadata, Storage and Backup). Each question may have a suggested answer or additional guidance on how to answer it effectively. Users have their own data and can save their work at any time.

Conclusion:

This DMP tool will allow researchers to quickly and efficiently create DMPs that address specific funding and institutional requirements. These DMPs can be easily shared and stored by libraries and others. They can also be used as a template for new and subsequent plans.

DMP Assistant allows administrators to create customized template forms to help implement a management policy. The flexibility in creating a new template form is an ongoing research project.

If you are a DMP Assistant user and wish to learn more about the tool, please contact us at lib@ualberta.ca.



Implemented DMPonline software for UA community in July 2014 with an open offer for others to make use of the tool

Toolkit - Dataverse



UAL DATVERSE NETWORK

Welcome to the University of Alberta Libraries' Dataverse network. This service is provided to help researchers **publish, analyze, distribute and preserve** their data and datasets.

DATERVERSES

31 Dataverses

A **Dataverse** is a container for research data studies, customized and managed by its owner.

RECENTLY RELEASED DATERVERSES

Canadian Heart Health Survey	Oct 15, 2015
Energy Transitions in Canada	Oct 13, 2015
Mapping and Expanding Library Classification for Marginalized Domains: Feminism as a Prototype	Oct 13, 2015
Public Attitudes in Alberta Toward the Formerly Mentally Ill	Oct 13, 2015
University of Alberta Graduated Survey	Oct 13, 2015

[View More >](#)

STUDIES

225 Studies, 2,475 Files, 1,409 Downloads

A **study** is a container for a research data set. It includes cataloging information, data files and complementary files.

RECENTLY RELEASED STUDIES

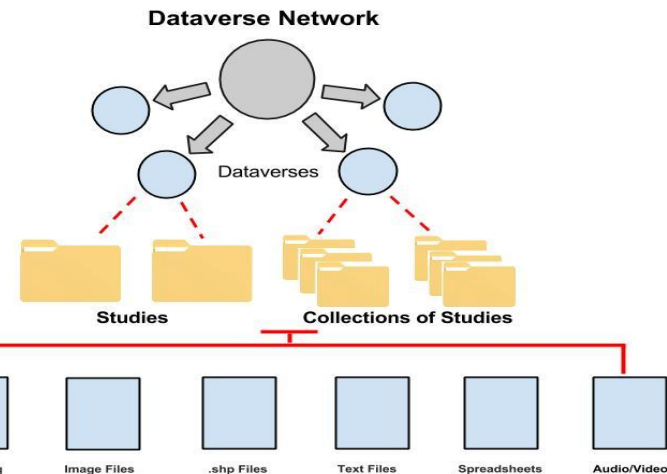
Alberta Survey, 2005 by Population Research Laboratory	Nov 12, 2015
Alberta Survey, 2007 by Population Research Laboratory	Nov 12, 2015
Edmonton Area Survey, 1985 by Population Research Laboratory	Nov 12, 2015
Edmonton Area Survey, 1986 by Population Research Laboratory	Nov 12, 2015
All Alberta Survey, 1987 by Population Research Laboratory	Nov 12, 2015

[View More >](#)

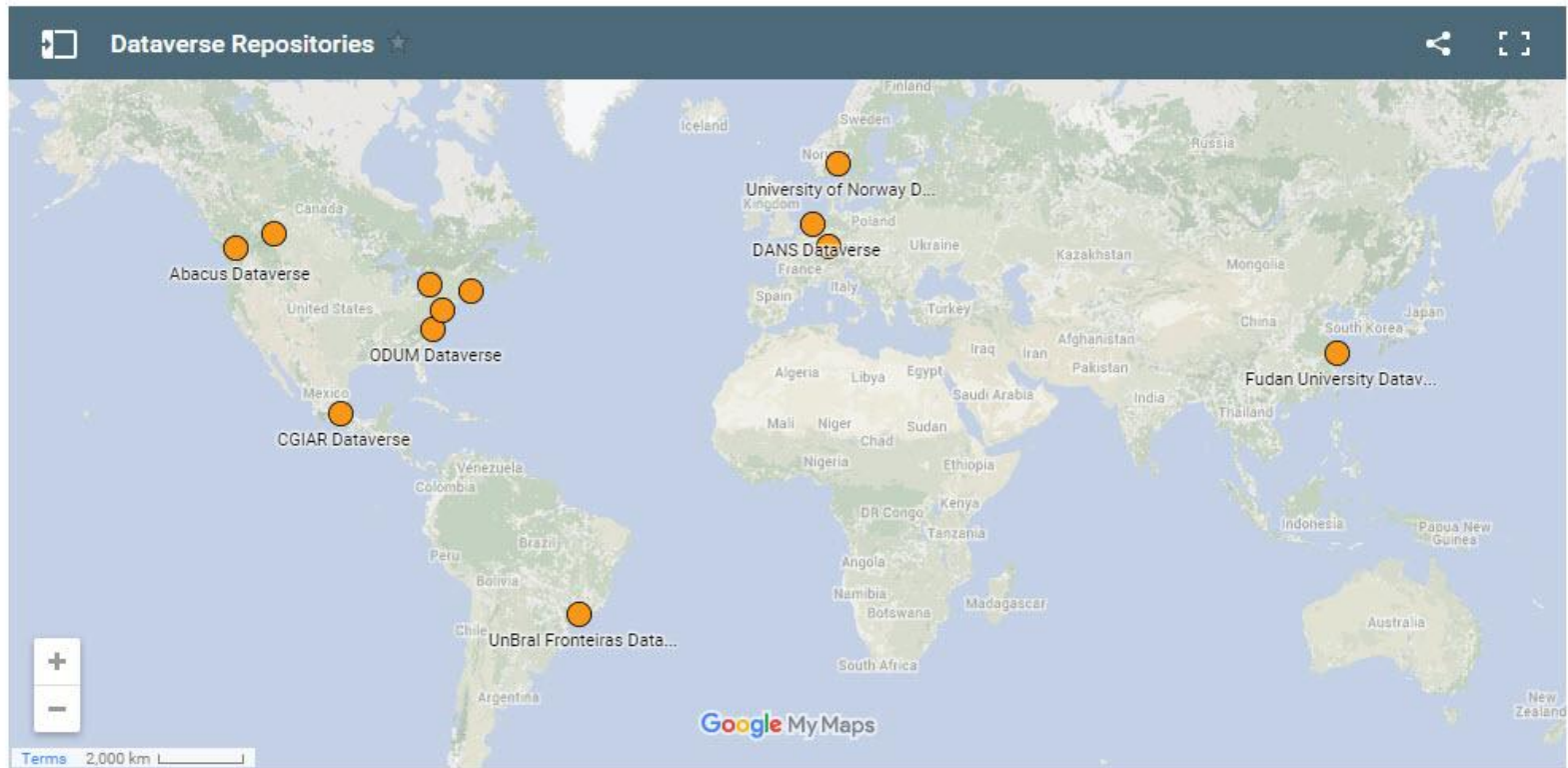
MOST DOWNLOADED STUDIES

Gamegate Reactions by Rockwell, Geoffrey; Suomela, Todd	619
Obispos y Prebendas de Chiapa	141
Addresses, Material Type and Heights for City of Edmonton Buildings in 1913. by Williams, Jaron ; Laliberte, L.W.	79
Open Genetics Lectures (OGL) Fall 2015 - Individual Chapters in .docx format by Locke, John; Deyholos, Michael; Harrington, Michael; Canham, Lindsay; Kang, Min	70
CCRI 1951 Census of Canada: Aggregate data and geography = CCRI 1951 Recensement du Canada: Données agrégées et cadre géographique by Gaffield, Chad; Baskerville, Peter; St-Hilaire, Marc; Amrhein, Carl; Cadigan, Sean; Moldofsky, Byron; Darroch, Gordon; Bellavance, Claude; Normand, France	70

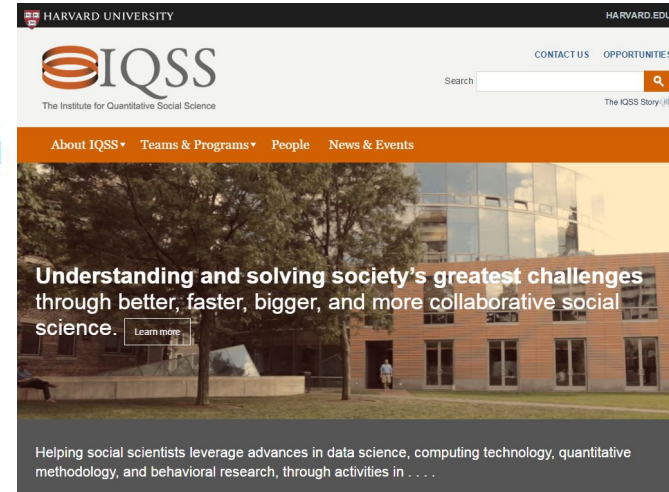
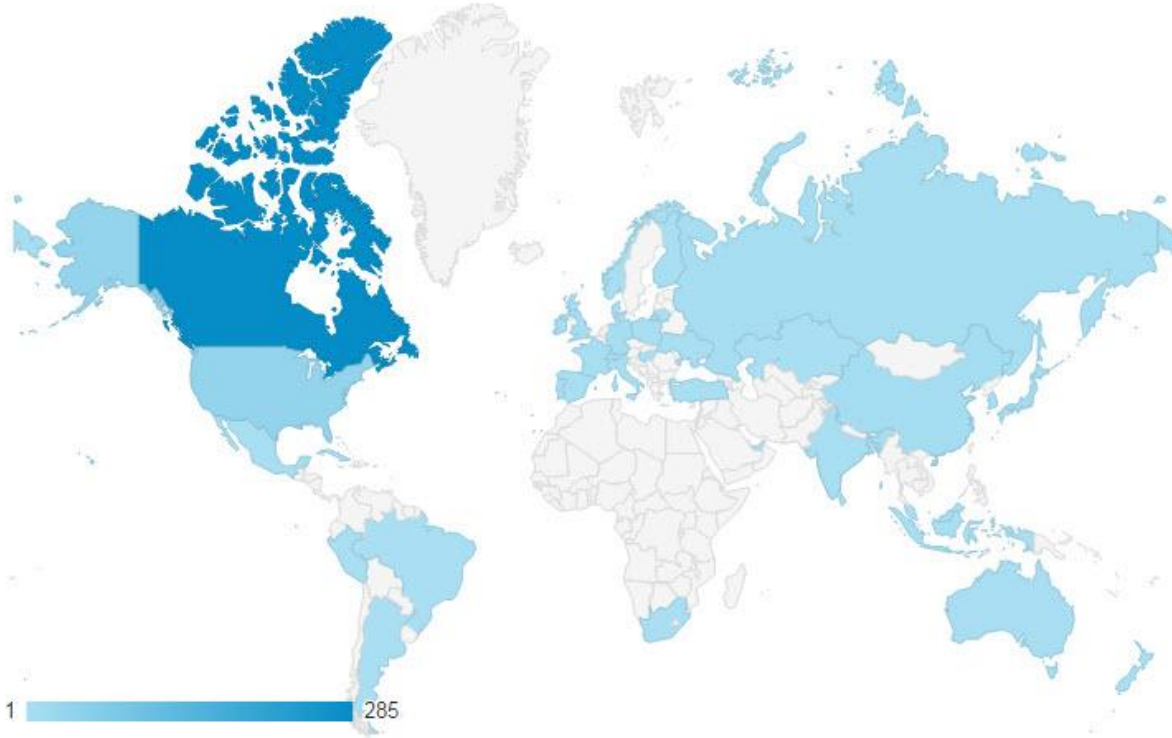
[View More >](#)



Adapted from : <http://www.dlib.org/dlib/january11/crossas/01crossas.htm>



Launched in March of 2014, the Univ of Alberta's Dataverse is one of three implementations in Canada (see UBC and Scholars Portal/OCUL). Dataverse represents an example of a growing global network.

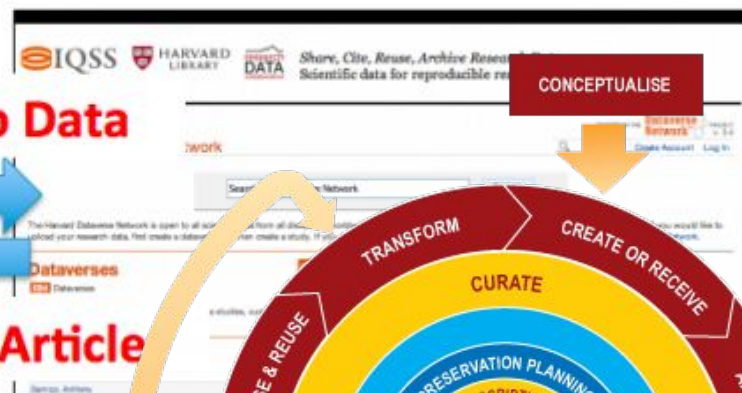


Global view of locations where users are accessing the UAL Dataverse repository.

PKP's Open Journal System (OJS)



Harvard Dataverse Network

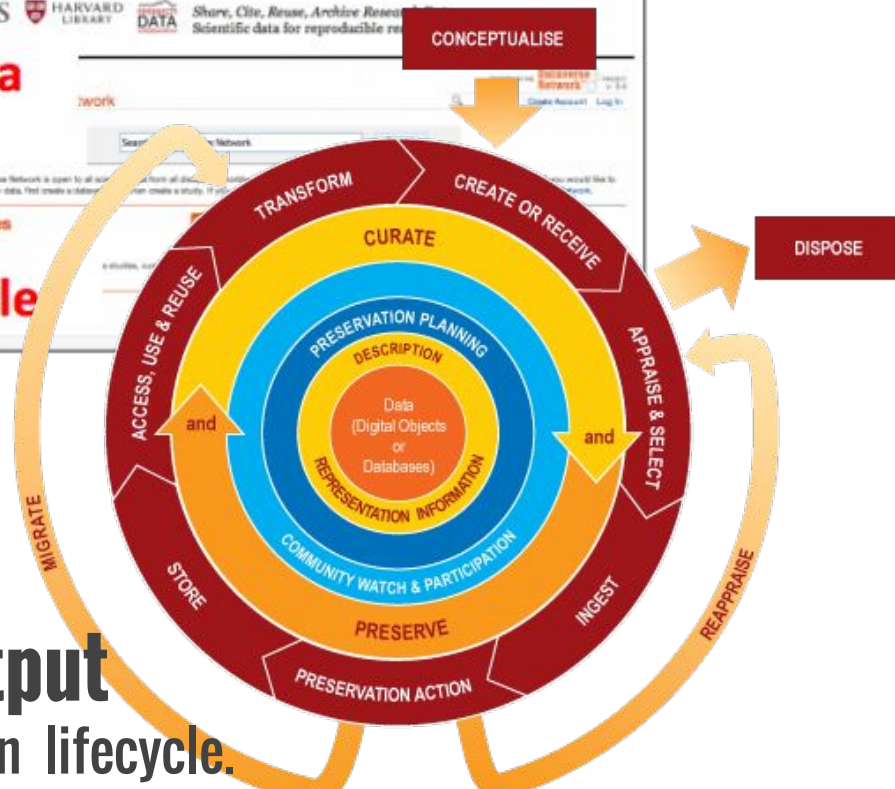


Citation to Data



Citation to Article

Data as a **first class scientific output**
in the research and scholarly communication lifecycle.



Lifecycle diagram: www.dcc.ac.uk/resources/curation-lifecycle-model

Toolkit: Repositories

Keep it.

Share it.

Use it.



Get ahead
on your repository.

Multi-Purpose Repository Solutions
Flexible User Interfaces
Durable Digital Asset Management

ERA
education & research archive

enter search terms

Search ERA
Advanced Search

Upload Your Research

Browse communities, subjects, or item types

Get more information about this service or contact us

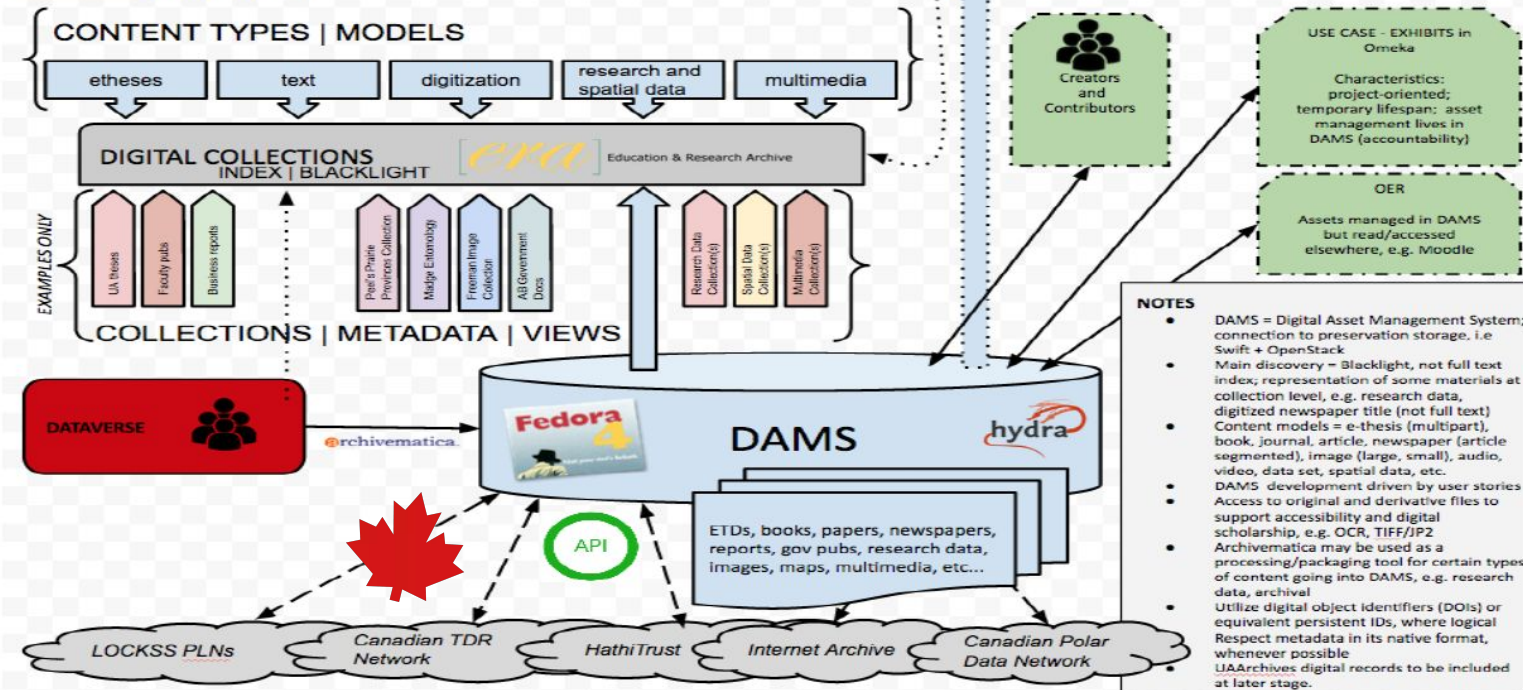
Keep it. Share it. Use it.
Welcome to University
of Alberta's Digital

Toolkit - Digital Asset Management System (Education and Research Archive repository)



**HYDRA
NORTH DAMS
PROJECT
2014/15 1.0**

MAIN DISCOVERY INDEX (LIBRARY_ALL)



Health Research Data Repository (Nursing)



- **Secure virtual research environment (VRE)** for housing and managing both qualitative and quantitative health research data and metadata throughout their lifecycle
- Provides **data management guidance** and **educational opportunities** to researchers and their team
- Provides **secure transferring and remote access** to research data
- Provides a regular **suite of qualitative and quantitative analytic software**
- Supports and promotes **health research and multidisciplinary collaboration**
- **Clearly operationalized policies and procedures**, with user orientation process
- **Centralized transcribing service**
- Promotes **secondary use and re-purposing** of research data



Shifting Cultures - Research Data Management Week

RESEARCH DATA MANAGEMENT WEEK PLENARIES

The Perils and Prospects of Digital Scholarship in 21st Century Canada

Ted Hewitt: President, Social Sciences and Humanities Research Council

Monday May 4, 10am-11am - ECHA 1 498

Virtual Research Environments and the Management of Data: The Case of Semantic Collaborative Corpora Analysis

Christoph Schindler

Tuesday May 5, 12-1pm - ECHA 1 498

Large Data Transfers and Mirroring: Technologies and Their Implications

Paul Lu: Computing Science, University of Alberta

Wednesday May 6, 10am-11am - ECHA 1 498

Dealing with the Crowd: Managing Data from Citizen Science and Crowdsourcing Projects

Todd Suomela, Elisabeth Beaubien, Justine Kummer

Friday May 8, 1-2pm - ECHA 2 150

The screenshot shows the University of Alberta website with a green header and a blue mosaic background. A central white box highlights the Research Data Management Week event. Below this, a section titled '\$348.5 Billion Engine' features a large yellow number '348.5' and a button to 'Apply Now'. To the right of this section are buttons for 'Careers' and 'Give to the U of A'.

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Research Data Management Week
April 28 - May 2
Manage, preserve, protect and share research data.
[FIND OUT MORE](#)

\$348.5 Billion Engine
Landmark study by Faculty of Business professors Tony Briggs and Jennifer Jennings highlights the economic and social impact of UAlberta alumni. [See the results.](#)

[Apply Now](#) [Careers](#) [Give to the U of A](#)

Support for digital scholarship and data stewardship

Recent examples:

- KIAS CRAFT grant
- Data purchase program
- Canadian Polar Data Network (CPDN), Canadian High Arctic Research Station (CHARS)
- Ice Core Archive
- Cloud to local preservation, e.g. genomics, civil engineering
- Preservation & stewardship
 - Canadian Writing Research Collaboratory



Library Human Resources

— — —

- RDM identified as top 3 priority of the Libraries
- Digital Initiatives unit - metadata, repositories, digital preservation, data curation, spatial data, HuCo, digitization, etc.
- raising skill level of all librarians
 - awareness and advocacy
 - training
 - direct support, e.g. DMPs, metadata, archiving, sharing

Building capacity - expertise and knowledge

CLIR/DLF Postdoctoral Fellows in Data Curation



Health &
human subject data
(2013-2015)

Web archiving &
digital scholarship
(2014-2016)



Towards a better understanding of value and cost

4C

Collaboration to Clarify
the Costs of Curation

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[D3.1—Summary of Cost Models](#)

In This Section

INVESTING IN OPPORTUNITY
CONFERENCE

OUTPUTS AND DELIVERABLES

THE DIGITAL CURATION
SUSTAINABILITY MODEL

D1.2—SUSTAINABILITY & BENEFITS
REALISATION PLAN

D2.1—BASELINE STUDY OF
STAKEHOLDER & STAKEHOLDER
INITIATIVES

D2.2—STAKEHOLDER REGISTRY

D2.3—FINAL STAKEHOLDER REPORT

D2.4—FINAL REPORT ON OUTREACH
EVENTS

D2.5—PROJECT COMMUNICATION
PLAN

D2.6—REPORT ON
COMMUNICATIONS ACTIVITIES

D3.1—EVALUATION OF COST
MODELS AND NEEDS & GAPS
ANALYSIS

D3.1—SUMMARY OF COST MODELS

D3.2—COST CONCEPT MODEL AND
GATEWAY SPECIFICATION

D3.3—CURATION COSTS EXCHANGE
FRAMEWORK

D4.1—A PRIORITISED ASSESSMENT
OF THE INDIRECT ECONOMIC
DETERMINANTS OF DIGITAL
CURATION

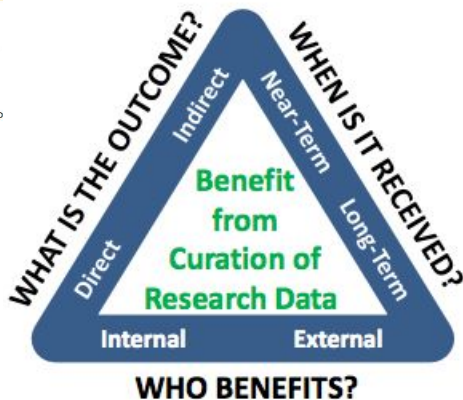
T4.2—DRAFT ECONOMIC

Summary of Cost Models

Here you see a list of ten current and emerging cost and benefit models that the 4C project has evaluated. If you follow the links you will find a short description of each of the models and a presentation of their core features structured in tables to allow for easy comparison.

The tables present among other things what information assets the models can handle, which activities they cover, which cost elements and variables they account for, and references for further reading. The intention of these summaries is to provide potential users with a quick overview of what models they may want to use or have a closer look at.

ID	Name	Acronym	Owner
1	Test bed Cost Model for Digital Preservation	T-CMDP	National Archives of the Netherlands
2	NASA Cost Estimation Tool	NASA-CET	National Aeronautics & Space Administration (NASA)
3	LIFE³ Costing Model	LIFE3	University College London and the British Library
4	Keeping Research Data Safe	KRDS	Charles Beagrie Ltd
5	Cost Model for Digital Archiving	CMDA	Data Archive and Networking Services (DANS)
6	Cost Model for Digital Preservation	CMDP	Danish National Archives and the Danish Royal Library
7	DP4LIB Cost Model	DP4LIB	The German National Library
8	PrestoPRIME Cost model for Digital Storage	PP-CMDS	The PrestoPRIME Project
9	Total Cost of Preservation	CDL-TCP	California Digital Library
10	Economic Model of Long-Term Storage	EMLTS	David Rosenthal



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[Research Data Management](#)
[Produce a DM Plan](#)

Calculating Data Management Costs

As a general rule, the cost of applying good data management practice is lower if it is performed on an ongoing basis, rather than applied retroactively. Funded researchers are expected to plan their approach to data capture, management and sharing at the earliest opportunity.

The School recognises that the creation, management and sharing of research data carries a cost, requiring the allocation of staff time and other resources. It encourages researchers to consider the resource implications of their research project and write these costs into research proposals whenever possible. Consult the LSHTM RDM Policy for further details.

Funder's position on Data Management costs

Many research funders, including the Medical Research Council, Wellcome Trust and Gates Foundation, encourage applicants to include data management and sharing costs in research bids. Consult data management advice provided by your specific funder for details.

RCUK guidance states data management and sharing costs may be claimed, with a small number of caveats:

- The Data Management Plan should describe activities that incur costs and provide justification the allocation of resources
- No expenditure can be 'double funded', i.e. a service that is centrally supported by indirect costs must not be included as a direct cost as well
- The budget and Justification of Resources section should broadly indicate where RDM costs will be incurred, where possible. E.g. data capture and cleaning, data curation and preservation, data sharing
- Post-project costs may be claimed as a direct cost if it is invoiced before the project end, e.g. POSF (Pay Once, Store Forever)
- Long-term storage should not be included if data is expected to be deposited in a research council funded repository
- Unforeseen data management costs incurred after project end will not be supported by the funder

Resources

[General Information](#)

[Guidance](#)

[Using the Archives](#)

Specialist Services

- [Open Access](#)
- [Research Data Management](#)
 - [Introduction to RDM](#)
 - [Produce a DM Plan](#)
 - [Create and Organise Data](#)
 - [Keeping Data Securely](#)
 - [Documenting your Data](#)
 - [Curate and Preserve Data](#)
 - [Share Data](#)
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 - [Deposit Data](#)
- [Freedom of Information](#)
- [Data Protection](#)
- [Records Management](#)
- [Bibliometrics](#)

Diagram: Keeping Research Data Safe Factsheet Cost issues in digital preservation of research data (2011) http://www.beagrie.com/static/resource/KRDS_Factsheet_0711.pdf



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LIBRARIES

library.ualberta.ca/researchdata

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