

Evaluation and Effectiveness of Digital Preservation

Mark Jordan
BIREDIAL 2019



Overview

Why evaluate?

Evaluating digital preservation against external criteria

Evaluating digital preservation using self-assessment tools

Evaluating digital preservation using gap analysis

Case studies

Why Evaluate?

Digital Preservation is for a Purpose

For a specific community

For specific types of access

Has a defined scope

Digital Preservation Requires Decisions

About roles, responsibilities, processes, workflows

About the files

About the metadata

About storage and applications

Digital Preservation is Expensive

Staff are expensive

Storage is expensive

Evaluating Against External Criteria

TRAC

Center for Research Libraries' *Trustworthy Repositories Audit & Certification: Criteria and Checklist*

Organizational Infrastructure

Digital Object Management

System Infrastructure

To date, CRL has certified 6 repositories.

CoreTrustSeal

Formed from the Data Seal of Approval, World Data System, and Research Data Alliance

Organizational Infrastructure

Digital Object Management

Technology

To date, CoreTrustSeal has certified 61 repositories.

nestor

Network of Expertise in Long-Term Storage of Digital Resources

Organisational Framework

Object Management

Infrastructure and Security

As of 2017, nestor has certified 2 repositories.

Evaluating Using Self Assessment Tools

DRAMBORA

Digital Repository Audit Method Based On Risk Assessment

Mandate & Commitment to Digital Object Maintenance

Organizational Fitness

Legal & Regulatory Legitimacy

Adequate Technical Infrastructure

NDSA Levels of Preservation

National Data Stewardship Alliance

Storage and geographic location

File fixity and data integrity

Information security

Metadata

File formats

Evaluating Using Gap Analysis

We can't build some super system that just solves digital preservation [...] Digital preservation is not simply a technical question, instead digital preservation involves understanding the nature of the content that matters most to an intended community and making judgement calls about how best to mitigate risks of potential loss of access to that content.

Trevor Owens

Aspects of Digital Preservation

Policy

Preservation policies articulate your institutional commitment to making content accessible in the future.

Action

Action plans describe the tools, procedures, workflows, and desired outcomes used to implement your policies.

Validation

Strategies for demonstrating that your action plans are achieving their intended outcomes.

Gap Analysis

The comparison of actual performance with potential or optimal performance.

Purpose is to identify areas for improvement, growth, etc.

We can evaluate digital preservation by identifying the gaps between actual performance and optimal performance

Frameworks from Business Literature

McKinsey 7Ss Framework

Nadler-Tushman Congruence Framework

SWOT Framework

PESTEL Framework

Types of “Performance” for Digital Preservation

Coverage: How much content is being preserved

Adoption: How many curators are using the service

Auditability: What aspects of the service are being audited

Outcomes: What desired outcomes are not being met

Value: Whether the service is cost effective

| | Policy | Action plans | Validation |
|--------------|--------|--------------|------------|
| Coverage | ✓ | ✓ | ✓ |
| Adoption | ✓ | | |
| Auditability | | ✓ | ✓ |
| Outcomes | ✓ | ✓ | ✓ |
| Value | ✓ | ✓ | |
| ... | | | |

Case Studies

Simon Fraser University

Medium-sized Canadian
university.

Active digitization program.

Some born-digital content.

Starting a web archiving activity.



Action Plans (selection)

General Digitized Collections

Web Archiving

Research Data

Born Digital Content

General Digitized Collections Action Plan

Action Plan defines bit-level preservation for this type of content

Digital Assets Management platform is Islandora

We perform periodic fixity checks on selected files

Gap Analysis

| | Potential Performance | Actual Performance |
|---------------------|------------------------------|---------------------------|
| Coverage | All digitized content | Achieved |
| Adoption | n/a | n/a |
| Auditability | All content is audited | Achieved |
| Outcomes | Bit-level preservation | Achieved |
| Value | High | Achieved |

Born-Digital Content Action Plan

Action Plan stipulates “Bit-level preservation of images of captured media is sufficient for this content.”

Gap Analysis

| | Potential Performance | Actual Performance |
|---------------------|------------------------------|---------------------------|
| Coverage | All born-digital content | Very little |
| Adoption | n/a | n/a |
| Auditability | All content is audited | Not achieved |
| Outcomes | Bit-level preservation | Not achieved |
| Value | Medium | Not achieved |

COPPUL

The Council of Prairie and Pacific University Libraries.

Part of strategic initiative to enable members' digital preservation activities (COPPUL Digital Stewardship Network).

Services include WestVault, Archivemata as a Service, shared repository, and collaborative web archiving.



WestVault

WestVault shared preservation storage

Content agnostic

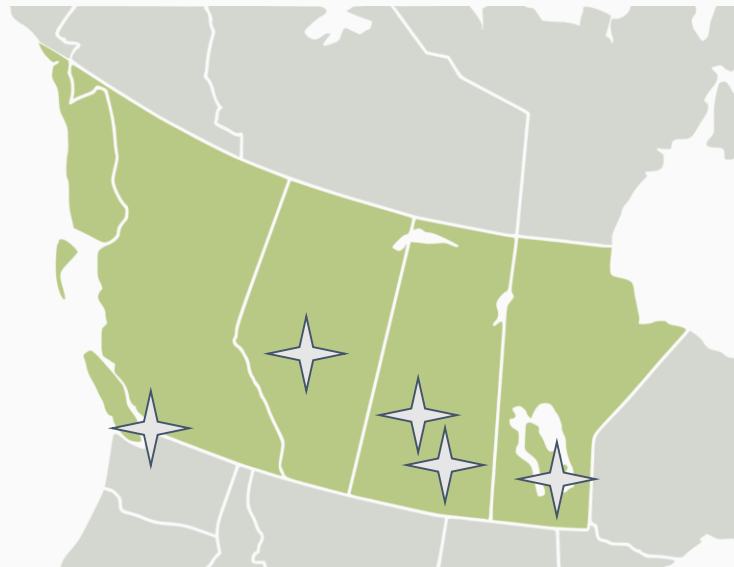
Subscribing institutions deposit their files, retrieve them out when they want

\$2,000 / year per TB, with 5 copies across western Canada



Drag and drop Files Here to Upload

Or Select Files to Upload



Gap Analysis

| | Potential Performance | Actual Performance |
|---------------------|------------------------------|---------------------------|
| Coverage | n/a | n/a |
| Adoption | All COPPUL members | 3 actively using service |
| Auditability | All content is audited | Achieved |
| Outcomes | Bit-level preservation | Achieved |
| Value | High | Achieved |

PKP Preservation Network

Automated deposit of Open Journal Systems content.

No cost to journals.

Content is validated and stored in distributed dark archive with nodes in North America and Europe.

Content will be made available to reading public after trigger event.



Gap Analysis

| | Potential Performance | Actual Performance |
|---------------------|------------------------------|---|
| Coverage | OJS 2.x and 3.x journals | OJS 2.x only |
| Adoption | Approximately 2,500 journals | Approximately 600 journals at time of study; more than double that now. |
| Auditability | All content is audited | Achieved |
| Outcomes | Bit-level preservation | Achieved |
| Value | High | Achieved |

Thank you