Digital Preservation Strategy 2015-2025

Vision, mandate and principles

Contents

Executive summary

As a public-spirited and research focused institution, The University of Melbourne generates and maintains considerable digital collections of enduring value. This includes the University's digital research output, research data and records, University records and cultural collections.

The mandate for preserving the University's digital product derives from University rules and policies, Government legislation, research funder requirements and strategic plans including the University strategy (Growing Esteem)[1] and the research strategy (Research at Melbourne, 2013).[2]

Against this evolving backdrop, the amount of digital product generated continues to grow, while expectations around preservation and access to the University's digital product – particularly research product – are also changing: driven largely by the evolving expectations of researchers, funders and the broader academic community.

In response to these challenges, the University has developed this digital preservation strategy with a vision to make the University's digital product of enduring value available into the future. The strategy was developed with input from the Academy and in collaboration with key University stakeholders including the Library, Melbourne Research and ITS.

Leveraging off international best practice and standards, it demonstrates the University's commitment to capability building, training, knowledge exchange, practice, advocacy and assurance to support digital preservation.

The University's digital preservation strategy identifies four principles for digital preservation at Melbourne related to the University's culture, infrastructure, policy context and organisational structure:

1. The University fosters a **culture** which promotes, supports and values the preservation of digital product of enduring value, as a means of enabling continuity to digital product management, archiving and access activities.

2. The University is committed to ongoing investment in high quality **infrastructure**, where infrastructure represents the appropriate assemblage of digital preservation experts, standards and policies that enables the organisation to perform and act in response to changing technologies and requirements over time.

3. University **policies** provide clear guidance to all stakeholders on meeting University, Government and Research Funding body requirements for the preservation of digital product.

4. Digital preservation represents the University's **shared commitment** to retain digital product of enduring value over the long-term for the benefit of designated communities and humankind.

Implementation of this strategy will be required across four partially overlapping digital product domains: digital research output; research data and records; University records, and cultural collections.

To facilitate the implementation of the strategy, the University anticipates the development of a coordinated set of implementation roadmaps (and respective business cases) for the four identified domains.

Digital Preservation Strategy

Vision

This Digital Preservation Strategy represents a clear vision: to make the University's digital product of enduring value available into the future. Realising this vision will support the University's functions, accountability and legacy. It will also facilitate communities of users to access digital assets of cultural, scholarly, and corporate significance over time.

The embedding of this digital preservation vision throughout University structures will endorse and promote continuing awareness of the importance of preserving digital memory and the accompanying issues at a strategic, administrative, cultural and technological level. The challenge is to consolidate technical skills and infrastructure (including both expertise and systems) pertaining to digital preservation, without losing sight of the ultimate human purposes that these facilities serve.[3] The University of Melbourne will address this challenge through an ongoing commitment to capability building, training, knowledge exchange, practice, advocacy and assurance for the preservation of digital product.

By 2025, the University of Melbourne will aim to achieve:

1. A widely held and coherent understanding of digital preservation in line with international best practice (Appendix 5) and any constraints related to the implementation of this strategy.
2. Consolidation and institution-wide awareness of policies, strategies, authorities and rules that underpin the need for digital preservation, as outlined in the Mandate section of this strategy.
3. The establishment of logical and operational workflows for the management, acquisition, retention, archiving and disposal of digital product that align with the principles of this strategy and the documents specified in the Mandate section.
4. The establishment of a fully configured digital archiving service.

Mandate

The mandate for the preservation of digital product, including University Records, research product, and collections, derives from University rules, policies, authorities and strategies that refer to Victorian and Commonwealth legislation, national research and funding policies and the University's strategy, Growing Esteem. These policies are listed in Appendix 2. They stipulate minimum statutory periods for the retention of certain classes of records and data and the need to provide for the adequate storage and preservation of, and access to, records, data and collections of enduring value. Policies underpinning digital preservation will be consolidated, coherently developed, and widely disseminated. A digital archiving capability will enable compliance with the policies of the University, funding bodies and legislation.

Digital preservation principles

In order to address the challenges of preserving the University's digital memory and to realise the digital preservation vision, existing approaches require review and improvement. This strategy defines four key principles around which action is required, to ensure the University of Melbourne is well placed to respond to its digital preservation requirements.

1. Culture

The University fosters a culture which promotes, supports and values the preservation of digital product of enduring value, as a means of enabling continuity to digital product management, archiving and access activities.

1.1 The University makes an ongoing commitment to digital preservation, building and expanding on existing services and expertise.

1.2 The University understands that preserving digital product requires active, ongoing, hands-on training and professional development for staff.

1.3 The University actively encourages the identification of specific roles and responsibilities for implementing digital preservation plans.

1.4 The University maintains documentation and support on issues of custodianship throughout the life of digital product, which spans from records, research data and collection management to digital preservation and long-term archiving.

2. Infrastructure

The University is committed to ongoing investment in high quality infrastructure, where infrastructure represents the appropriate assemblage of digital preservation experts, standards and policies that enables the organisation to perform and act in response to changing technologies and requirements over time.

2.1 The University invests in the necessary digital preservation infrastructure – including expertise and technology – to protect and disseminate its legacy of digital product of enduring value.

2.2 The University provides for access to secure, persistent storage infrastructure and expertise that is managed and optimised for the long-term preservation of digital product of enduring value.

2.3 Digital preservation infrastructure is flexibly managed and maintained, so that technology limitations do not restrict decisions on appraisal and acquisition of digital product.

2.4 The integrity and authenticity of digital product is retained, guarded and assured through all digital preservation maintenance actions.

3. Policy

University policies provide clear guidance to all stakeholders on meeting University, Government and Research Funding body requirements for the preservation of digital product.

3.1 The University maintains a suitable policy framework for the preservation of digital product.

3.2 The University adopts a sustainable funding stream to meet University obligations for the long-term preservation of digital product.

3.3 Targeted guidance is provided to researchers to facilitate the implementation of policies related to digital preservation.

4. Organisation

Digital preservation represents the University's shared commitment to retain digital product of enduring value over the long-term for the benefit of designated communities and humankind.

4.1 Selection and appraisal processes and practices for digital preservation are established for identifying digital product of intrinsic long-term value, in alignment with Legislation and University policies, strategies and aims.

4.2 Organisational and support structures for managing digital product include models for digital preservation planning and action, which enable the University to meet its statutory obligations.

4.3 Processes are established and confirmed for identifying, capturing, assigning and reviewing description information, preservation information, administrative information and representation information associated with digital product.

Scope

This strategy pertains to all University of Melbourne digital product, namely, research product (including research outputs, data and records), University records, and cultural collections requiring long-term preservation.

In practice, there is overlap between these categories. For example, a resource may simultaneously be research data as well as forming part of a cultural collection.

Research product

Research product comprises:

1. **Research output**: The University's research output include books, journal articles, book chapters, conference papers and non-traditional research outputs,[4] as well as Higher Degree Theses. Published research data collections (see below) may also sometimes be considered research output.

2. **Research data and records**: Digital research data may be numerical, descriptive or visual, raw or processed, analysed or unanalysed, experimental, observational or machine generated.

Records that describe research data (including for example how and why the data was collected) constitute University Records (see below). They are essential for enabling research data to be managed, utilised and preserved.

University Records

Digital or digitised records requiring preservation in order to form the University's organisational memory and legacy, including its research, teaching, engagement and administrative activities.

Cultural Collections

Digital - or digital manifestations of - Cultural Collections (as defined by the Cultural Policy Statement, 2010) maintained by the University.

Out of scope

The preservation of physical records and any process related to the digitisation of physical records is outside the scope of this strategy. If a physical record is digitised however, the digital instance of that record does fall within the scope of this strategy.

Responsibility

Responsibility, expertise and capacity for digital preservation of University Records, Research Output, Research Data and Records, and Cultural Collections is distributed across the University. Key areas of responsibility for the management, preservation and access to certain classes of digital materials addressed in this strategy are outlined in Appendix 3. A digital archiving service will provide for the preservation of, and appropriate continuing access to, digital product of enduring value, for which no provision or limited provision currently exists. It will facilitate the coordinated development of common policies and frameworks, and provide shared infrastructure, technologies and expertise. Creators and custodians of University records, research product (including research outputs, and research data and records) and cultural collections will retain responsibility for the preservation and management of certain categories of records.

From strategy to action

This strategy requires implementation across the University's four overlapping domains of digital product:

1. Research Outputs
2. Research Data and Records
3. University Records
4. Cultural Collections.

To facilitate the implementation of the strategy, the University anticipates the development of coordinated implementation roadmaps (and respective business cases) to address the distinct but related preservation challenges facing each domain.

Each roadmap will be closely related, as will the underpinning infrastructure. On completion of this strategy, this infrastructure is expected to include the University's Institutional Repository[5] for preserving and disseminating research outputs, a research data repository enabling the University to efficiently meet its research data storage requirements, and a digital archiving service for the preservation of digital product of enduring value.

Although further work is required in all four domains to ensure the preservation of the University's digital product of enduring value, the case for research product, including both research outputs and research data and records is of particular concern. This is due to the inherent challenges of preserving digital research data over the long term in a large and diverse research-focused institution, and the evolving requirements for appropriate access to research product from Government, research funders and the broader community.
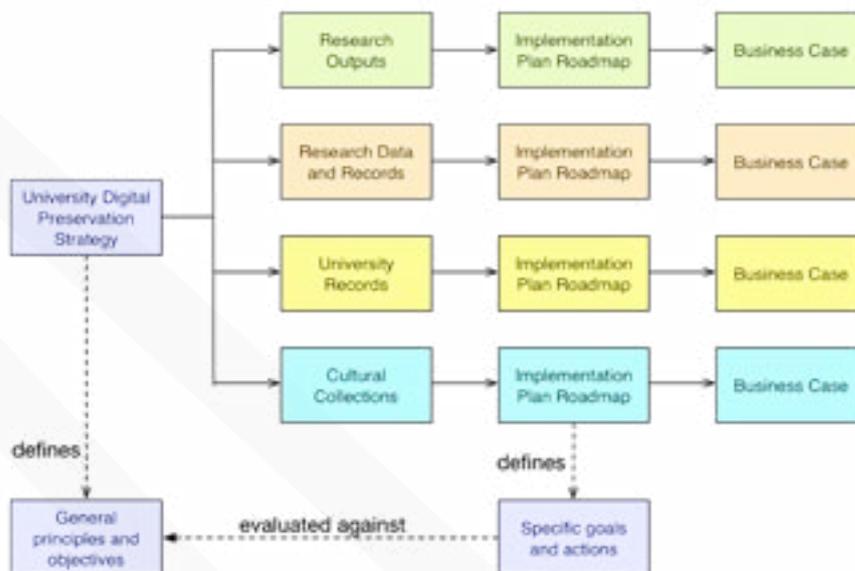

Figure 1: Expected implementation approach for the University Digital Preservation Strategy

Appendices

Appendix 1: Definitions

Data custodian

The individual or organisation having possession of and responsibility for the care and control of data.

Digital archive

A digital archive ensures that digital records are professionally managed and preserved, while also ensuring access over time. A digital archive encompasses the technical infrastructure, standards, policies and procedures and support services for managing and providing access to digital objects and their associated metadata, so that they can be readily used.

Digital preservation

The act of maintaining digital information in a correct and independently understandable form over the long term.

Digital product

All University records, information, research product, and cultural collections that exist in digital format.

Provenance

The relationship between records and the organizations or individuals that created, accumulated, and/or maintained and used them in the conduct of personal or corporate activity.

Research data

Research data supports (or may support in the future) an argument, theory or test, and can exist in physical form, digital form or both. Provenance information about the data might also be included, in some cases identifying both the data itself and the processes used to create the data. Data may be numerical, descriptive or visual, raw or processed, analysed or unanalysed, experimental, observational or machine generated.

Research data management

Research data management refers to the processes, practices, policies and guidelines used to manage data to enable verification of research outcomes, and support future research, sharing and reuse of research data.

Research outputs

Research outputs include books, journal articles, book chapters and conference papers, as well as non-traditional research outputs including original creative works, live performance of creative works, recorded/rendered creative works, and curated or produced substantial public exhibitions and events. Higher degree theses, while also University records, are in addition research outputs.

See ERA 2012 Submission Guidelines (2012): www.arc. gov.au/pdf/era12/ERA2012_SubmissionGuidelines.pdf

Research product

The University's research product includes all research output, data and records.

University Records

University records are comprised of recorded information in any form (ie regardless of format), created or received and maintained by the University in the transaction of business activities or conduct of affairs. Records are retained as evidence of such activities, including research, teaching, engagement and administration.

University records include the records of semi autonomous bodies which operate University business operations and where control and management is exercised by or under direction of a board on behalf of University Council; records of controlled entities; and records of affiliates only if incorporated under the *University of Melbourne Act* 2009. (See listings in Annual Report).

Appendix 2: Applicable legislation, policies and strategies

Legislation

Copyright Act 1968 (Commonwealth)

Privacy Act 1988 (Commonwealth)

Public Records Act 1973 (Victoria)

Information Privacy Act 2000 (Victoria)

Health Records Act 2001 (Victoria)

Evidence Act 2008 (Victoria)

Freedom of Information Act 1982 (Victoria)

Crimes Act 1958 (Victoria)

Regulations

Regulation 8.3.R5 – Melbourne University Archives Rules unimelb.edu.au/Statutes/pdf/r83r5.pdf

Research and funding bodies

Australian Code for the Responsible Conduct of Research (2007) www.nhmrc.gov.au/guidelines/publications/r39

NHMRC Policy on Dissemination of Research Findings (July 2012) www.nhmrc.gov.au/grants/policy/dissemination-research-findings

ARC Open Access Policy (January 2013) arc.gov.au/applicants/open_access.htm

University policies

Records Management Policy policy.unimelb.edu.au/MPF1106

University Archives Policy policy.unimelb.edu.au/MPF1112

Management of Research Data and Records Policy policy.unimelb.edu.au/MPF1242

Cultural policy statement unimelb.edu.au/culturalcollections/culturalpolicystatement.pdf

Records Disposal Authority unimelb.edu.au/records/RDA/index.htm

Strategy

Growing Esteem (2005/2010) growingesteem.unimelb.edu.au

Research at Melbourne: ensuring excellence and impact to 2025 unimelb.edu.au/research/research-strategy.html

Appendices (continued)

Appendix 3: Digital preservation responsibilities

Records creation and temporary records

Temporary records (including research data) are managed by the budget division or work units creating the records.

See Section 2.5, Records Management Policy: policy.unimelb.edu.au/MPF1106

Research data and records

Researchers have responsibility for collection, storage, use, re-use, access and retention of research data. Researchers must plan for ongoing custodial responsibilities for research data and records, provide information about access and potential re-use of the data and future deposit into open access research databases (subject to legal, ethical and confidentiality agreements on the data) and negotiate with their head of department for the relocation of data and records within the University.

See Section 2, Management of Research Data and Records Policy: policy.unimelb.edu.au/MPF1242

Heads of departments or research units are required to establish and implement departmental processes for the storage and retention of research data and records and ensure the provision of expert advice to facilitate access to electronic data of continuing value over time.

See Section 3, Management of Research Data and Records Policy: policy.unimelb.edu.au/MPF1242

Storage and management of permanent University Records

Records Services and University Archives will store and manage permanent University records.

See Section 2.5, Records Management Policy: policy.unimelb.edu.au/MPF1106

Preservation of and access to Archives

The University of Melbourne Archives has responsibility to preserve and provide authorised access to archived records of the University, in accordance with the Records Management Policy and related procedures, and to non-University collections held by the Archives.

See University Archives Policy policy.unimelb.edu.au/MPF1112 and Records Management Policy policy.unimelb.edu.au/MPF1106

Authorising access to University Records

The University Secretary is responsible for authorising access to university records up to 30 years old and the University Archivist is responsible for authorising access to University records over 30 years old, where required in consultation with heads of department.

See Regulation 8.3.R5 Melbourne University Archives Rules unimelb.edu.au/Statutes/pdf/r83r5.pdf and Sections 2.3 and 2.4 of the Records Access Procedure policy.unimelb.edu.au/MPF1107

Authorising access to non-University Archives collections

The University Archivist has responsibility for authorising access to non-University collections held by the Archives as agreed with collection donors.

See Regulation 8.3.R5, Melbourne University Archives Rules: unimelb.edu.au/Statutes/pdf/r83r5.pdf

Permanent published archive of the University

The University Library and Archives has responsibility for maintaining the permanent published archive of official publications and research output of the University, the latter including higher degree theses, final research reports and/or publications.

See University of Melbourne Archives Publication Policy and Procedure August 2004, Version 2: 13 March 2006.

Cultural Collections

Each Cultural Collection is the responsibility of a single University division or entity, with a designated officer appointed as manager. The manager of each University cultural resource is the primary advocate, planner or leader for that activity.

See Cultural Policy Statement (pp 3-4) unimelb.edu.au/culturalcollections/culturalpolicystatement.pdf

Appendix 4: Existing University digital preservation activities

Australian National Data Service (ANDS) project

The ANDS project is a national project funded by the Federal Government, which supports research data management initiatives and is building the Australian Research Data Commons to support the reuse of Australian research data.

researchdata.ands.org.au/

Central Research Data Registry

The University is establishing a Central Research Data Registry to record information about research data collections at the University.

blogs.unimelb.edu.au/vivoands/about/

Doing Data Better @ Melbourne initiative

A website bringing together research data management information and resources.

researchdata.unimelb.edu.au/

immersiveInformatics Training Pilot

The University Library is undertaking the immersiveInformatics Training pilot in 2013 in collaboration with the University of Bath.

www.immersiveinformatics.org

Institutional Repository project

The University Library is expected to replace the software underlying the University's Institutional Repository. This repository stores many research outputs including publications and theses.

library.unimelb.edu.au/

Mediaflux Pilot Project

ITS is trialling the use of Mediaflux (a system for managing research data) in collaboration with a number of research centres.

www.arcitecta.com/Products/Mediaflux

Records Services

Records Services provides services relating to records management from the point of creation onwards.

unimelb.edu.au/records/

University Archives

The University Archives collects, manages and provides access to the historical records of the University.

www.lib.unimelb.edu.au/collections/archives/

University Digitisation Centre consultation services

The University Digitisation Centre provides a range of digitisation services.

www.digitisation.unimelb.edu.au

University Library research data curation service

The University Library is establishing a research data curation service for researchers.

library.unimelb.edu.au/

VicNode project

VicNode is the Victorian node of the national Research Data Storage Infrastructure (RDSI) project funded by the Federal Government. The VicNode project is being run jointly by The University of Melbourne and Monash University.

vicnode.org.au/

rdsi.uq.edu.au/

Appendices (continued)

Appendix 5: Selected relevant digital preservation initiatives

Archives New Zealand and National Library of New Zealand

Archives New Zealand and the National Library of New Zealand have published a joint digital preservation strategy to enable the preservation and management of digital content to ensure that it can be accessed now and into the future.

archives.govt.nz/advice/government-digital-archive-programme/digital-preservation-strategy

Cornell University

The Cornell University Library Strategy (2011-2015) includes an aim to provide long-term access to digital content that is core to the University's academic mission. A research data management service for supporting researchers has also been established at the University.

www.library.cornell.edu/aboutus/inside/strategicplanning

Digital Preservation Coalition

The Digital Preservation Coalition is based in the UK, providing training and support to members and advocacy for digital preservation in the UK.

www.dpconline.org

Harvard University

Harvard University's Institute for Quantitative Social Science (IQSS) has developed software called The Dataverse Network, which facilitates preservation, sharing, citation and analysis of data.

thedata.org/

Library of Congress

The Library of Congress is very active in digital preservation initiatives, running the National Digital Information Infrastructure and Preservation Program and the National Digital Stewardship Alliance.

www.digitalpreservation.gov

The National Library of Australia

The National Library of Australia has a Digital Preservation Policy (4th Edition, 2013), which guides the Library's approach to preserving its digital collections. The Library is also active in collaborating with others to preserve digital information resources.

www.nla.gov.au/policy-and-planning/digital-preservation-policy

Oxford University

Oxford University Council approved a policy on the management of research data and records in 2012 and is currently undertaking an initiative (the Data Management Rollout at Oxford (DaMaRO) Project) to develop and embed infrastructure to implement the policy.

damaro.oucs.ox.ac.uk/

Parliamentary Archives (UK)

The UK Parliamentary Archives released a digital preservation strategy in 2008 and a subsequent preservation policy and roadmap in 2009 to address the digital preservation risks facing the Parliamentary Archives.

www.parliament.uk/business/publications/parliamentary-archives/digitalpreservation/

The University of Edinburgh

The University of Edinburgh has published a research data management policy and developed training and support services to facilitate its implementation. The University has also implemented a research data repository.

www.ed.ac.uk/schools-departments/information-services/services/research-support/data-library

University of North Carolina at Chapel Hill

In 2012 the University of North Carolina at Chapel Hill published a series of recommendations for research data stewardship at the University.

sils.unc.edu/sites/default/files/general/research/UNC_Research_Data_Stewardship_Report.pdf

Notes

Digital Preservation Strategy (pages 3-7)

1. Growing Esteem (2010). growingesteem.unimelb.edu.au

2. Research at Melbourne Strategy: Ensuring Excellence and Impact to 2025 (2013). unimelb.edu.au/research/research-strategy.html

3. David M. Levy. 1998. Heroic measures: reflections on the possibility and purpose of digital preservation. In Proceedings of the third ACM conference on Digital libraries (DL ‹98), Ian Witten, Rob Akscyn, and Frank M. Shipman, III (Eds.). ACM, New York, NY, USA, 152-161. DOI=10.1145/276675.276692
doi.acm.org/10.1145/276675.276692

4. Non-traditional research outputs include for example original creative works or the live performance of creative works. See Section 5.4.9, ERA 2012 Submission Guidelines (2012):
www.arc.gov.au/pdf/era12/ERA2012_SubmissionGuidelines.pdf

5. A project is under way to replace the University's Institutional Repository in 2014.

6. ERA 2012 Submission Guidelines (2012).
www.arc.gov.au/pdf/era12/ERA2012_SubmissionGuidelines.pdf

library.unimelb.edu.au

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