

This is a peer-reviewed manuscript version. The final version is published in *EDUCAUSEreview online* (<http://www.educause.edu/ero/article/digital-preservation-policy-framework-case-study>).

INTRODUCTION

In the 21st century, when more and more content and data is born digital or converted to digital to enhance access, archives and libraries, researchers and their larger institutions are grappling with providing effective digital preservation so that this content is not just accessible now, but well into the future. In 2012, The Ohio State University Libraries (OSUL), with a cross-functional team representing OSUL's institutional repository, information technology unit, and special collections and archives, embarked upon a year-long process to develop a digital preservation policy framework. The purpose of the framework is to formalize our "...continuing commitment to the long-term stewardship, preservation of and sustainable access to its diverse and extensive range of digital assets."¹

A lot has been written about digital preservation and accompanying models, from the Digital Preservation Three-Legged Stool² to OAIS³ to the Data Curation Lifecycle⁴ and the

¹ The Ohio State University, University Libraries. *Digital Preservation Policy Framework*, (August 2013). http://library.osu.edu/documents/SDIWG/Digital_Preservation_Policy_Framework.pdf

² Originally developed for the Digital Preservation Management workshop at Cornell University in 2003—and subsequently moved to ICPSR in 2007 and is currently maintained by MIT Libraries—the Digital Preservation 3-Legged Stool model addresses: Organizational Infrastructure, which is expressed in a comprehensive policy framework, providing the rationale and mandate for a program as well as detailing the requisite policies, procedures, and plans; Technological Infrastructure, which entails preservation planning to provide ongoing support for a robust, flexible, and cost-effective technological platform; and a sustainable Resources Framework, covering staffing, technological, operational, and other costs, is necessary to undergird the organizational and technology infrastructures.

³ Open Archival Information System (OAIS) Reference Model: A high-level model that describes the components and processes necessary for a digital archives, including six distinct functional areas: ingest, archival storage, data management, administration, preservation planning, and access. (Richard Pearce-Moses, A Glossary of Archival and Records Terminology, Society of American Archivists 2005) <http://www2.archivists.org/glossary/terms/o/open-archival-information-system>. Full reference model and specifications: Reference Model for an Open Archival

Records Continuum⁵ among other; guidelines from NEDCC's Handbook for Digital Projects⁶ to the Digital Preservation Management Workshops and Tutorial⁷ to North Carolina's Digital Preservation Best Practices and Guidelines⁸; and standards, such as the Library of Congress' Sustainability of Digital Formats⁹. However it is the intent of this article to use OSUL's experience in creating an organizational policy for digital preservation, to address the policy development process and its importance to an organization, and provide an outline of repeatable best practices, not just for library and archives, but for other institutions and organizations that need to preserve and provide access to digital data, information and objects.

Information System (OAIS), Recommended Practice, CCSDS 650.0-M-2, Magenta Book, Space Communications and Navigation Office, NASA, June 2012 <http://public.ccsds.org/publications/archive/650x0m2.pdf>

⁴ The Digital Curation Centre's Data Curation Lifecycle Model "...provides a graphical, high-level overview of the stages required for successful curation and preservation of data from initial conceptualisation or receipt through the iterative curation cycle." <http://www.dcc.ac.uk/resources/curation-lifecycle-model>

⁵ The records continuum model is alternative to records lifecycle model where "...there are clearly definable stages in recordkeeping, and creates a sharp distinction between current and historical recordkeeping...[it] sees records passing through stages until they eventually 'die', except for the 'chosen ones' that are reincarnated as archives. A continuum-based approach suggests integrated time- space dimensions. Records are 'fixed' in time and space from the moment of their creation, but recordkeeping regimes carry them forward and enable their use for multiple purposes by delivering them to people living in different times and spaces." Sue McKemmish, "Yesterday, Today and Tomorrow: A Continuum of Responsibility" *Proceedings of the Records Management Association of Australia 14th National Convention, 15-17 Sept 1997*, RMAA (Perth, 1997)

<http://www.infotech.monash.edu.au/research/groups/rcrg/publications/recordscontinuum-smckp2.html>

⁶ Northeast Document Conservation Center, *Handbook for Digital Projects*, (Massachusetts, 2000) <http://www.nedcc.org/assets/media/documents/dman.pdf>

⁷ <http://www.dpworkshop.org/>

⁸ North Carolina Department of Cultural Resources, Digital Preservation Best Practices and Guidelines <http://digitalpreservation.ncdcr.gov/>

⁹ Library of Congress, *Sustainability of Digital Formats Planning for Library of Congress Collections* <http://www.digitalpreservation.gov/formats/index.shtml>

WHAT IS DIGITAL PRESERVATION?

Digital preservation can be defined as the combination of policies, strategies and actions to ensure access to and accurate rendering of authenticated reformatted and born digital content over time regardless of the challenges of media failure and technological change.¹⁰ Graham suggests that for “...the scholarly community to give serious weight to electronic information depends upon its trust in such information being dependably available, with authenticity and integrity maintained.”¹¹ To effectively accomplish the activities of digital preservation, an institution or organization should have a digital preservation policy that articulates and institutionalizes its commitment to their preservation strategies and actions.

Historically, archives and libraries have articulated—in policies and procedures—the process for the preservation of the paper-based documents and analog objects within their institutions. As Marcum noted in 1996, “Preservation is a fundamental responsibility of libraries and archives of record. To be sure, the preservation imperative has been imperfectly carried out in the print environment, but the problem grows even more complicated in the digital world.”¹² Just because the process of digital preservation may be more complicated, does one really need a separate policy for digital preservation from their institution’s preservation policy for books, manuscripts, and/or physical objects?

¹⁰ Association for Library Collections & Technical Services, “Definitions of Digital Preservation” <http://www.ala.org/alcts/resources/preserv/defdigpres0408>.

¹¹ Peter S. Graham, “Issues in Digital Archiving,” *Preservation: Issues and Planning* editors Paul N. Banks and Roberta Pilette (Chicago, IL: American Library Association, 2000), p.98. <http://www.alastore.ala.org/detail.aspx?ID=26>

¹² Deanna B. Marcum, “The Preservation of Digital Information,” *The Journal of Academic Librarianship* Vol. 22, No. 6 (November 1996), p. 452.

There is a fundamental difference in trying to preserve paper-based and/or analog objects and digital objects; the Society of American Archivists' definition for preservation states:

1. The professional discipline of protecting materials by minimizing chemical and physical deterioration and damage to minimize the loss of information and to extend the life of cultural property.
2. The act of keeping from harm, injury, decay, or destruction, especially through noninvasive treatment.¹³

This definition infers the preservation of the original artifact or object, whereas previously defined the objective of digital preservation "...is the accurate rendering of authenticated...content over time." By definition, digital preservation does not necessarily guarantee "preservation" of the actual digital artifact or object, but its informational value and how it is rendered and accessed. Consequently, digital preservation is significantly different enough from traditional preservation to warrant a dedicated policy.

With a successful track-record for establishing preservation policy for paper-based and analog objects, librarians and archivists have a number of definitive standards to rely upon to monitor the effectiveness for those types of objects. Nevertheless, where does one begin to develop a digital preservation policy? When asked to develop such a policy, more often than not, one likely feels the experience of that recurring dream of sitting down for a final exam only to realize one never came to class the entire semester. As Peter Lyman asked in 1998 "When we

¹³ Richard Pearce-Moses, *A Glossary of Archival and Records Terminology*, (Chicago: Society of American Archivists, 2005). <http://www2.archivists.org/glossary/terms/p/preservation>.

know a book is important, we know what to tell a publisher: print it on acid free paper. Well what do we do with digital documents?”¹⁴

¹⁴ Peter Lyman & Howard Besser, “Defining the Problem of Our Vanishing Memory: Background, Current Status, Models for Resolution,” *Time & Bits Managing Digital Continuity*, editors Margaret MacLean and Ben Davis (Los Angeles, CA: The J. Paul Getty Trust 1998), p. 11.

WHY POLICY IS IMPORTANT? A LITERATURE REVIEW

Why does an institution or organization need a “policy”? If we first look to the literature about preservation policy, Morrow articulates in *Defining the Library Preservation Program* that,

The process of developing policy, or the periodic review of an established policy, allows a library to establish and shape an institution-specific context for preservation activities...The existence of a formal preservation policy statement will make it easier for a library to codify preservation practices and implement preservation activities evenly throughout the various autonomous custodial units that make up most larger libraries...Finally, the development of an institutional preservation policy reflects the reality that libraries are systems built on standard practices. Standardization is necessary to maintain order and ensure quality and cost-effectiveness; however, unexamined practices lead to entrenchment.¹⁵

Lyman and Besser noted, “The long term preservation of information in digital form requires not only technical solutions and new organizational strategies, but also the building of a new culture that values and supports the survival of bits over time.”¹⁶ Beagrie, Semple, Williams and Wright reinforced the idea that “...any long-term access and future benefit may be heavily dependent on digital preservation strategies being in place and underpinned by relevant policy and procedures...[and that]...The digital preservation policy should be integrated into business drivers, activities and functions e.g. regulatory compliance, staff development, applied technology, academic excellence.”¹⁷

¹⁵ Carolyn Clark Morrow, “Defining the Library Preservation Program: Policies and Organization,” *Preservation: Issues and Planning* editors Paul N. Banks and Roberta Pilette American Library Association (Chicago, IL: American Library Association, 2000), p. 5.

¹⁶ Peter Lyman & Howard Besser, “Defining the Problem of Our Vanishing Memory: Background, Current Status, Models for Resolution,” *Time & Bits Managing Digital Continuity* editors Margaret MacLean and Ben Davis (Los Angeles, CA: The J. Paul Getty Trust 1998), p. 12.

¹⁷ Neil Beagrie, Najla Semple, Peter Williams, and Richard Wright, *Digital Preservation Policies Study Part 1: Final Report October 2008 A Study Funded by JISC*, (Higher Education Funding Council for England (HEFCE):

The Electronic Resource Preservation and Access Network's (ERPANET) Digital Policy Preservation Tool suggests that "A policy forms the pillar of a programme for digital preservation. It gives general direction for the whole of an organization, and as such it remains on a reasonably high level...From an external point of view, a written policy is a sign that the organization takes the responsibility to preserve digital material..."¹⁸

Cloonan and Sanett noted, "...the lack of preservation policies in place is a distinct gap in the research design of many of the projects and possibly reflects a lack of commitment among the stakeholders in institutions."¹⁹

McGovern reported, "Policies and other documentation of decisions and actions represent one of the best indicators of the development of the organizational leg. At the 2006 Best Practices Exchange (BPE) in North Carolina 'participants stressed again and again that a successful digital preservation program requires a strong foundation...Participants identified four essential elements for building a strong foundation for a digital preservation program: support and buy-in from stakeholders; "good enough" practices implemented now; collaborations and partnerships; and documentation for policies, procedures, and standards."²⁰

October 2008), pp. 5-13.

http://www.jisc.ac.uk/media/documents/programmes/preservation/jiscpolicy_p1finalreport.pdf.

¹⁸ ERPANET (Electronic Resource Preservation and Access Network), *erpa guidance – Digital Preservation Policy Tool* (ERPANET: September 2003), p. 3. <http://www.erpanet.org/guidance/docs/ERPANETPolicyTool.pdf>.

¹⁹ Michèle V. Cloonan and Shelby Sanett, "Preservation Strategies for Electronic Records: Where We Are Now—Obliquity and Squint?" *The American Archivist*, Vol. 65 (Spring/Summer 2002): p. 91.

²⁰ Nancy Y. McGovern, "A Digital Decade: Where Have We Been and Where Are We Going in Digital Preservation?" *RLG DigiNews* Vol. 11, No. 1 (April 15, 2007). McGovern refers to the organizational leg of the digital preservation three-leg stool created for the Digital Preservation Management workshop. Originally developed at Cornell University in 2003, the workshop subsequently moved to ICPSR in 2007 and is currently maintained by MIT Libraries. The three legs of the stool are: Organizational Infrastructure, which is expressed in a comprehensive policy framework, providing the rationale and mandate for a program as well as detailing the requisite policies, procedures, and plans; Technological Infrastructure, which entails preservation planning to provide ongoing support

While McGovern's observation about the sentiments expressed at the 2006 BPE noted that there is an awareness of the need for documented digital preservation policy, Russell reported in 2007 the results of a survey that,

The data indicated that although 92 percent of institutions were already digitizing from source materials, only 29 percent had written policies or plans for digitization. While 59 percent of respondents reported that their digital materials had a need life of 25 years or longer, which was the longest option offered in the questionnaire, only 13 percent had written plans or policies for digital preservation. This data suggested that institutional planning for digitization lagged far behind creation and confirmed our view that institutions needed help with policy development...²¹

The results of two studies—one in Europe and one in North America—published in 2011 indicate that progress has been made, but there is still a gap between preserving digital objects and having articulated policy to govern and manage the process. A 2009 Planets²² project survey showed,

Nearly half (48%) of the organisations surveyed have a policy for the long-term management of digital information, where long-term is defined as greater than five years. This varies by organisation; 64% of archives, and 43% of libraries, have a digital preservation policy. However, only one-quarter (27%) of government departments, and the public sector in general, have a digital preservation policy in place. A high proportion of commercial organisations (88%), and suppliers and vendors (60%), have digital preservation policies, although these results should be treated with caution, due to the

for a robust, flexible, and cost-effective technological platform; and a sustainable Resources Framework, covering staffing, technological, operational, and other costs, is necessary to undergird the organizational and technology infrastructures. <http://worldcat.org/arcviewer/1/OCC/2007/07/10/0000068890/viewer/file1.html#article3>.

²¹ Ann Russell, "Surveying the Digital Readiness of Institutions," *First Monday*, Vol. 12, No. 7 (July 2007). http://firstmonday.org/issues/issue12_7/russell/index.html.

²² Planets, Preservation and Long-term Access through Networked Services, was a four-year project co-funded by the European Union under the Sixth Framework Programme to address core digital preservation challenges. The primary goal for Planets was to build practical services and tools to help ensure long-term access to our digital cultural and scientific assets. <http://www.planets-project.eu/>.

small size (eight commercial organisations, and ten suppliers and vendors), and potentially unrepresentative nature, of the sample.²³

Similarly a spring, 2010 survey of seventy-two Association of Research Libraries institutions—ARL the nonprofit organization of 126 research libraries at comprehensive, research institutions in the United States and Canada that share similar research missions, aspirations, and achievements—indicated that 51.5% have preservation policies for their institutional repositories.²⁴

Even more recently Bergin conducted a study in 2013 “...to identify institutions with established digital preservation programs, and investigate how these programs were implemented.” Her study, which included responses from 148 institutions, produced very similar results to Russell’s indicating that while over 90% of the respondents had undertaken efforts to conduct digital preservation, less than 30% had actual written digital preservation policies.²⁵

Ambacher has expressed concern that, “Worldwide there is a lack of confidence in the ability of archivists and librarians to manage digital data. Those professions are seen as slow to embrace digital data preservation...The professions have spent far too much time studying the issues, far too much time on grant-funded pilot projects, far too much time developing redundant best practices, and far too little time developing recommended standards. The professions may have been waiting for someone else to solve the problems, for someone else to provide an out-of-

²³ Pauline Sinclair, James Duckworth, Lewis Jardine, Ann Keen, Robert Sharpe, and Tessella, “Are you Ready? Assessing Whether Organisations are Prepared for Digital Preservation,” *The International Journal of Digital Curation*, Vol. 6, No. 1 (2011). p. 274. <http://www.ijdc.net/index.php/ijdc/article/viewFile/178/247>

²⁴ Yuan Li and Meghan Banach, “Institutional Repositories and Digital Preservation: Assessing Current Practices at Research Libraries,” *D-Lib Magazine*, Vol. 17, No. 5/6 (May/June 2011). <http://www.dlib.org/dlib/may11/yuanli/05yuanli.html>.

²⁵ Megan Banach Bergin, *Sabbatical Report: Summary of Survey Results on Digital Preservation Practices at 148 Institutions*, (October 2013) p. 21-22. http://works.bepress.com/meghan_banach/7/

the-box solution.”²⁶ However, by developing and adopting a policy, set of best practices and standards, one does not necessarily need to wait for that out-of-the-box solution, and can begin to take incremental steps to provide a better digital preservation environment.

²⁶ Bruce Ambacher, “Establishing Trust in Digital Repositories,” *Statistical Science and Interdisciplinary Research Vol. 10: Multimedia Information Extraction and Digital Heritage Preservation*, editors Usha Mujoo Munshi and Bidyut Baran Chaudhuri, (series editor Sankar K. Par) (World Scientific Publishing Co. Pte. Ltd. New Jersey: 2011) p. 343.

HOW DID WE GET HERE? OSUL'S JOURNEY TOWARDS A DIGITAL PRESERVATION POLICY

The commitment within The Ohio State University Libraries to the development of a digital preservation policy did not occur overnight, it was the culmination of more than ten years of digital initiative efforts at Ohio State. OSUL was definitely an organization that had been involved in a variety of digital initiatives for more than a decade without an articulated policy in place to guide a consistent approach to managing and preserving those digital assets.

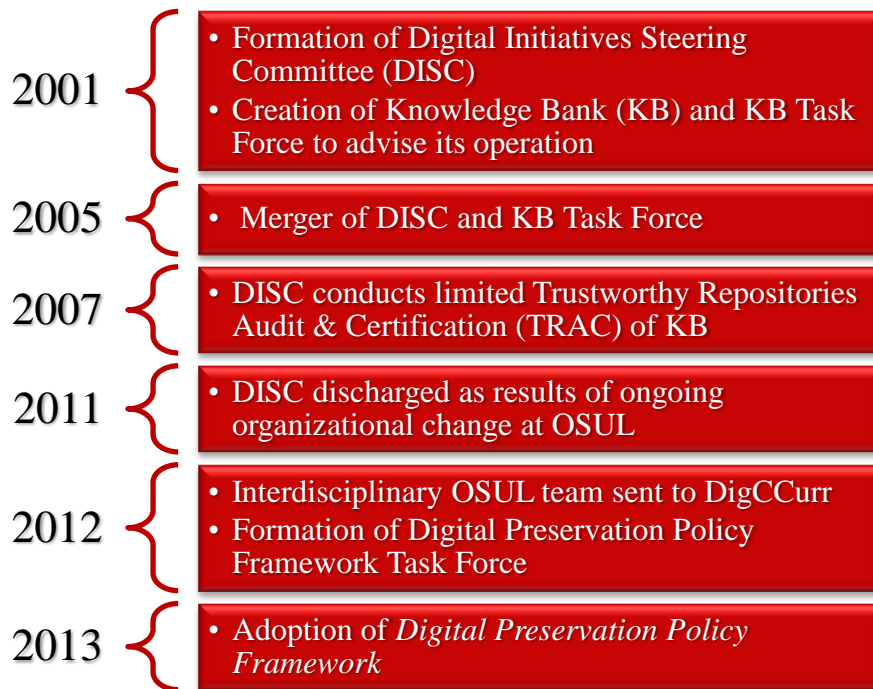


Figure 1 Timeline to *Digital Preservation Policy Framework*

In late 2001, the recommendations from the OSUL Digital Projects Task Force suggested that line staff be dedicated to digital initiatives; however, existing personnel and budgetary constraints did not allow for this. Instead, the Digital Initiatives Steering Committee (DISC) was

created as a means “...to maintain momentum, solicit, evaluate, and support digital projects...”²⁷

At about the same time The Ohio State University (OSU) embarked on a project to create an institutional repository, the Knowledge Bank (KB) that collects, indexes, and preserves digital content produced by faculty and to support the creation of new research content.²⁸ The KB was realized originally as a collaboratively funded effort with the Office of the CIO, managed by OSUL. Initially, OSUL assigned a task force to advise the Knowledge Bank operations that had regular interaction with DISC through 2005 when it was concluded that the projects being coordinated by the two groups overlapped sufficiently to warrant a merger.²⁹

Over the decade of DISC’s existence, the group primarily focused its efforts on prioritizing and shepherding digital projects, as well as identifying digital best practices. It also began to focus on the need for digital preservation standards. Two of the three key findings of a 2007 Trustworthy Repositories Audit & Certification (TRAC)³⁰ review of the KB noted that there was “...insufficient centralized prose documentation for the many activities associated with the KB...[and]...no clearly documented preservation strategy...”³¹ In other words, OSUL had not articulated a digital preservation policy. Still, it would be another five years before OSUL officially began to construct a digital preservation policy framework.

²⁷ Digital Initiatives Steering Committee, The Ohio State University Libraries, *Memorandum: Recommendation on the future of DISC* (December 3, 2003).

²⁸ Sally A. Rogers, “Developing an Institutional Knowledge Bank at Ohio State University: From Concept to Action Plan,” *portal: Libraries and the Academy*, Vol. 3, No. 1 (2003), p. 126. <http://kb.osu.edu/dspace/handle/1811/188>.

²⁹ The Ohio State University Libraries, *Libraries’ Digital Initiatives Steering Committee (DISC) Annual Report*, (February 2006).

³⁰ Trustworthy Repositories Audit & Certification process is now an ISO standard—Trusted Digital Repository (TDR) Checklist (ISO 16363)—that is based upon the OAIS (Open Archives Information System) model and provides tools for audit and certification of the trustworthiness of digital repositories.

³¹ The Ohio State University Libraries, *OAIS Working Group (Beth Black, Tschera Connell, Amy McCrory) Trustworthy Repository (TR) evaluation summary, 10/3/2007* (October 2007).

In the fall of 2011, OSUL officially discharged DISC as part of a larger organizational restructuring. Interestingly, this coincided with now former DISC members participating in two meetings in the region related to digital preservation.³² The OSUL participants came away from these meetings reinforced in the notion that the Libraries needed a written, well-articulated digital preservation policy.

In the spring of 2012, OSUL opted to send a multidisciplinary team to the DigCCurr Professional Institute (DigCCurr) at the University of North Carolina – Chapel Hill (UNC). The team was represented by the head of digital content services (which includes management of the institutional repository), a programmer from application development and support, and the digital resources archivist. The DigCCurr Professional Institute is a three-part program that is “...aimed at assisting digital collection managers in developing their digital curation strategies...”³³ and spans a six-month period. It begins with a weeklong intensive institute at UNC; is followed by a six-month period where attendees work on personal projects at their home institutions that they identified during the intensive; and culminates in a two-day meeting at UNC to report out on the progress of projects. The OSUL team opted to use their project as a means of developing a digital preservation policy.

³² “Staying on TRAC: Digital Preservation Implications and Solutions for Cultural Heritage Institutions” presented by LYRASSIS (September 27 - 28, 2011) and “Forever is a Long Time: Preservation Planning for Digital Collections” facilitated by Liz Bishoff for OhioLINK’s Digital Preservation Task Force (October 24 - 25, 2011).

³³ DigCCurr Carolina Digital Curation Curriculum Project>Professional Institutes
<http://ils.unc.edu/digccurr/aboutII.html#institutes>

WHAT DO YOU PLAN TO DO? PROPOSING A POLICY DEVELOPMENT PROCESS

Policy development has to be sanctioned at the highest level of an organization, but with buy-in throughout the organization if it is going to be effective. Cloonan and Sanett observed “We suspect that policy is lagging far behind the development of standards, because the development of good public policy requires the appropriate political climate as well as the cooperation of numerous stakeholders.”³⁴

The team assembled by OSUL to attend DigCCurr did benefit from an organizational, political climate that was intent upon improving the way in which OSUL managed its digital assets, although there was not a preconceived notion as to what the team’s potential project would be. First the project team would need to experience the DigCCurr intensive, then determine what they believed would be the highest priority for OSUL, and finally, they would have to formally propose a project to the OSUL Executive Committee (OSUL Exec)—comprised of the Libraries’ Director, Associate Directors and Assistant Director.

In preparing a proposal to OSUL Exec to form a Task Force to develop a digital preservation policy framework, the project team met several times in June and July of 2012 to debrief and conduct a cursory TRAC review—as a gap analysis—of the libraries digital initiatives. In addition to identifying technological and resources gaps, it reinforced the more in-depth TRAC review of four years earlier that OSUL had “...no clearly documented preservation strategy...”³⁵ Without having a policy framework or strategy, it is hard to justify the need to fill the technological, resources, and other administrative gaps.

³⁴ Michèle V. Cloonan and Shelby Sanett “Preservation Strategies for Electronic Records: Where We Are Now—Obliquity and Squint?” *The American Archivist*, Vol. 65 (Spring/Summer 2002), p. 90.

³⁵ The Ohio State University Libraries, *OAIS Working Group (Beth Black, Tschera Connell, Amy McCrory) Trustworthy Repository (TR) evaluation summary, 10/3/2007* (October 2007)

During a meeting at the end of July with representatives of OSUL Exec to make the case for a policy development task force, the team stressed that OSUL was at the second stage of Kenney and McGovern's *Five Organizational Stages of Digital Preservation*

1. Acknowledge: Understanding that digital preservation is a local concern;
2. Act: Initiating digital preservation projects;
3. Consolidate: Seguing from projects to programs;
4. Institutionalize: Incorporating the larger environment; and
5. Externalize: Embracing inter-institutional collaboration and dependency.

And that a key component required to move to the third stage is that "...the organization makes explicit its commitment to digital preservation by developing basic, essential policies and by understanding the value of policies as part of the solution..."³⁶

OSUL Exec made that commitment, in mid-August 2012, by creating the Digital Preservation Task Force (DPTF) "...that has evolved out of The Ohio State University Libraries' (OSUL) involvement in the DigCCurr Institute 2012. It is charged with developing a digital preservation policy framework for all OSUL digital assets that will address: Mission statement, Guiding principles, Standards identification and Prioritization process."³⁷ The DPTF was comprised of the three individuals who had attended the DigCCurr Institute who would consult as necessary with personnel from OSUL units including but not limited to Collections Management, Preservation and Reformatting, Special Collections and Archives, and the Head Digital Initiatives.³⁸

³⁶ Anne R. Kenney and Nancy Y. McGovern, "The Five Organizational Stages of Digital Preservation," *Digital Libraries: A Vision for the 21st Century: A Festschrift in Honor of Wendy Lougee on the Occasion of her Departure from the University of Michigan* (Ann Arbor, MI: MPublishing, University of Michigan Library 2003). <http://quod.lib.umich.edu/s/spobooks/bbv9812.0001.001/1:11?id=kenney.11:rgn=div1:view=fulltext>.

³⁷ The Ohio State University Libraries, Digital Preservation Framework Task Forces Charge, (August 2012).

³⁸ During this effort OSUL was recruiting this newly formed position of Head of Digital Initiatives. The individual did not start until April, 2013, but was consulted for reactive input prior to the adoption of the policy framework.

WHAT IS THE PLAN? THE POLICY DEVELOPMENT PROCESS

The goals of a good policy “...are to provide guidance and authorization on the preservation of digital materials and to ensure the authenticity, reliability and long-term accessibility of them...Moreover, a policy should explain how digital preservation can serve major needs of an institution and state some principles and rules on specific aspects which then lay the basis of implementation.”³⁹ The best policy documentation is succinct and to the point, as it should be easily digestible and understandable to everyone throughout an organization. It should address what should be accomplished and why; how it should be done should be a separate set of implementation and/or procedural documents.

How does an institution or organization move from a blank piece of paper or screen to a robust, articulated policy? The DPTF approached its assignment by conducting a review of a dozen digital preservation policy frameworks for institutions and organizations that ranged from national libraries to academic libraries to one dedicated solely to research data.⁴⁰ The vast majority of the frameworks analyzed were four to six pages in length. The team’s analysis revealed the following common components that constituted a good digital preservation policy:

- Introduction or Purpose: A contextualization and articulation of the need for the policy.
- Mandate: A statement that addresses legal, institutional and/or unit requirements to preserve digital objects.
- Objectives: A description of the intentions of an institution’s or organization’s digital preservation program, possibly tied into the organization’s mission statement.
- Scope: A statement that establishes boundaries as to what the organization will preserve and more often than not establish priorities amongst various materials; examples include

³⁹ ERPANET (Electronic Resource Preservation and Access Network), *erpa guidance – Digital Preservation Policy Tool* (ERPANET: September 2003), p. 3. <http://www.erpanet.org/guidance/docs/ERPANETPolicyTool.pdf>.

⁴⁰ See “Appendix 3: Sources Consulted” of the *Digital Preservation Policy Framework* for a listing of institutional policies reviewed. http://library.osu.edu/documents/SDIWG/Digital_Preservation_Policy_Framework.pdf

but are not limited to born digital, digitized with analog original, digitized without analog original, and commercially available digital materials.

- **Challenges:** An identification and articulation of the challenges and risks associated with the process of digital preservation.
- **Principles:** A statement that addresses the values and philosophy by which an organization operates its digital preservation program.
- **Roles & Responsibilities:** An identification of the various roles in the digital preservation process; it may aggregate the roles at an institutional or unit within an institution level, establish group roles, or identify individual roles.
- **Collaboration:** A statement that acknowledges that digital preservation is a shared community responsibility and identifies steps to be taken to cooperate and collaborate.
- **Selection & Acquisition:** Criteria for materials to be preserved, tied to a repository's collection development policy.
- **Access & Use:** A statement that addresses the concept of open access as well as levels of restriction; further, it addresses the likely inability to render the original digital artifact and that the effort will be made to deliver the best possible surrogate.
- **References:** A listing that identifies other standards and policies referred to within the policy document.
- **Glossary:** A listing of terms as necessary.

One standard administrative section that was missing from all but one of the policies reviewed was a statement to maintain the currency of the policy through a regular review process.

Having completed this analysis by the end of the first month of the DPTF's existence, one could suggest that the team just cherry-pick the best bits of each of the reviewed policies, finalize the policy, and move onto proposing implementation steps. However, while some parts of the policy framework are

repeatable almost verbatim from policy to policy (and in OSUL's final policy document), there are others that really needed to be considered within the organization's environment. The team identified the pieces of each of the reviewed policies that best fit the OSUL organizational setting, certainly all of those identified above, with additional sections for:

- Categories of Commitment: A statement that is a more detailed articulation of the scope.
- Levels of Preservation: An articulation of the digital preservation spectrum that moves from safe storage to full information preservation.
- Implementation: An acknowledgment that policy implementation is contingent upon appropriate resources and additional activities; in other words that just because the policy is there does not mean that any actual preservation activity is being conducted.
- Review Cycle.

Further, the team added appendices to address a more granular discussion of roles and responsibilities, include the glossary and list of the sources consulted.

The DPTF assigned sections of the proposed policy framework to each other to complete initial drafts, and it met regularly throughout September and October to review and revise these drafts. The work was conducted on OSU's [CarmenWiki](#) that allowed for collaborative authoring and versioning as well as providing transparency throughout the process.⁴¹ The team also had the opportunity during this period to meet with its DigCCurr Faculty Mentor, Nancy McGovern, the Head of Curation and Preservation Services at MIT Libraries, to discuss its progress and the direction the project was taking.

⁴¹ Digital Preservation Policy Framework Task Force, <https://carmenwiki.osu.edu/display/libraries/Digital+Preservation+Policy+Framework+Task+Force>

As noted, many of the policy framework sections were incorporated nearly verbatim from examples the DPTF examined. However, several were significantly modified or wholly new. The Principles section of the policy framework is one of those that took on a somewhat different look than many of the policies that the team had reviewed. The DPTF felt that there was a need to not only articulate the guiding principle (see Figure 2) that OSUL was committed to long term preservation of its digital assets and that digital preservation is an integral part of its processes, but also to establish a set of operating principles (see Figure 3) and to commit to an adherence to standards (see Figure 4). The Operating Principles are aspirational and state that the library will strive to develop a scalable, reliable, sustainable, and auditable digital preservation infrastructure; comply with OAIS; ensure data integrity; and comply with copyright, intellectual property rights and other legal rights among other aspirations.⁴²

Guiding Principles : OSUL will use consistent criteria for selection and preservation as for other resources in the libraries. Materials selected for digital stewardship and preservation carry with them OSUL's commitment to maintain the materials for as long as needed or desired.

- The Libraries are committed to the long term preservation of selected content.
- Digital preservation is an integral part of OSUL's processes
- Processes, policies, and the institutional commitment are transparently documented.
- Levels of preservation and time commitments determined by selectors, curators, in consultation with technical experts
- OSUL will participate in the development of digital preservation community standards, practice, and solutions.

Figure 2: OSUL Digital Preservation Guiding Principles

⁴² The Ohio State University, University Libraries. *Digital Preservation Policy Framework*, (August 2013). http://library.osu.edu/documents/SDIWG/Digital_Preservation_Policy_Framework.pdf

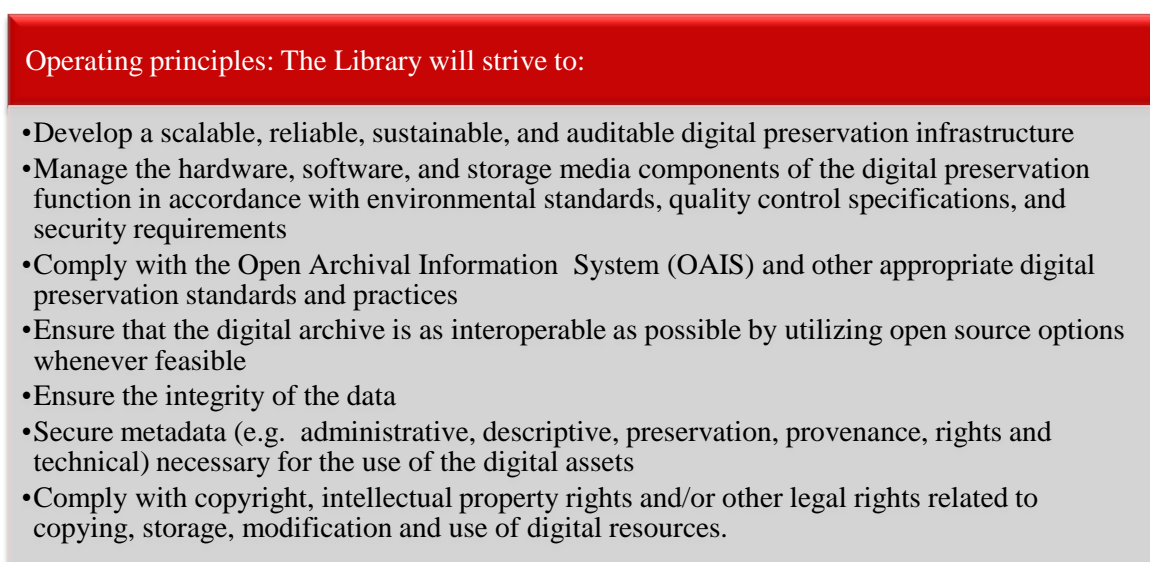


Figure 3: OSUL Digital Preservation Operating Principles

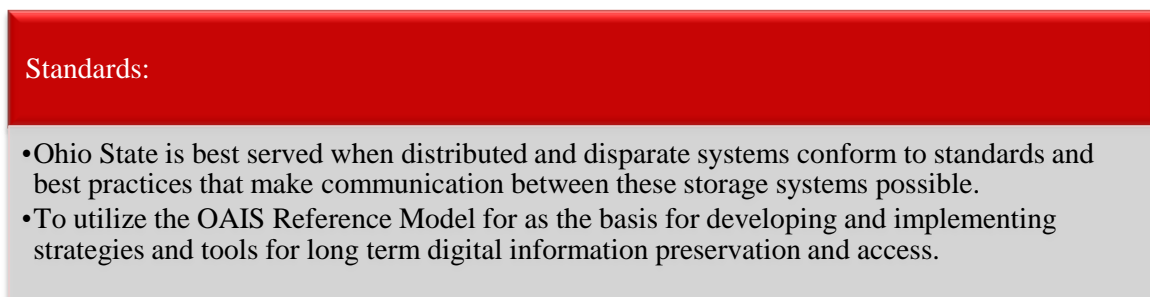


Figure 4: OSUL Digital Preservation Standards

When the DPTF presented the draft of the policy framework to the OSUL Exec for sponsors in mid-November, it was generally well received. However, the Categories of Commitment section was a point of contention and a lesson learned in how the structural presentation of information, depending upon one's point of view, carries certain biases. In the initial draft that the sponsors reviewed, the section was listed as "Commitments" with sub-categories for "Priorities" and "Levels of Preservation." The priorities appeared, without an introductory statement, as a numbered list:

1. Born digital materials

2. Digitized materials (no available analog)
3. Digitized materials (available analog)
4. Commercially available digital resources
5. Other items and materials

The DPTF believed that if OSUL was able to establish an effective process for preserving born digital assets, it would benefit all of the other categories in the list. Further, the team felt that born digital and digitized materials with no analog copy available were inherently more at risk and therefore a higher priority. However, one can also look at that list without a contextualizing statement and presume that the number one priority for OSUL as a whole organization is to preserve its digital assets, not the books on the shelves.

Therefore, the title was changed to “Categories of Commitment”, the sub-category title “Priorities” was dropped, an introductory statement was added and the numbered list was changed to a bulleted list without changing the order (see Figure 5). Additionally, the “Levels of Preservation” sub-category was subsequently elevated to a

OSUL’s levels of commitment as outlined below recognize that developing solutions for “born digital” materials informs solutions for the other categories; it does not imply that these assets are inherently more valuable or important than any of the other categories and/or our traditional, analog materials.

- **Born digital materials:** rigorous effort will be made to ensure preservation in perpetuity of material selected for preservation, both library resources and institutional records.
- **Digitized materials (no available analog):** every reasonable step will be taken to preserve materials without a print analog, when re-digitizing is not possible or no analog versions are located elsewhere. Also included are digitized materials that have annotations or other value-added features making them difficult or impossible to recreate.
- **Digitized materials (available analog):** reasonable measures will be taken to extend the life of the digital objects with a readily available print analog. However, the cost of re-digitizing as needed will be weighed against the cost of preserving the existing digital objects
- **Commercially available digital resources:** OSUL has responsibility for working externally through consortia, licensing agreements, etc. To assure that one party or parties provides the necessary infrastructure to provide for preservation activities, so that Ohio State faculty, staff, and students will have adequate ongoing access to commercially available digital resources. If the resources are external to OSUL, there needs to be an articulated exit strategy in the event of the cessation of the consortia or licensing agreements. Particular emphasis should be given to resources which exist in digital form only.
- **Other items and materials:** no preservation steps will be taken for materials requested for short term use such as materials scanned for e-reserve and document delivery, or for content that is deemed unessential.

Figure 5: OSUL Digital Preservation Categories of Commitment

category of its own. The Levels of Preservation identify the spectrum of preservation activities from safe storage and bit preservation to full information preservation. Although the DPFT originally construed this as a means of identifying OSUL's commitment to preservation at a point along that spectrum, ultimately the team decided that this section needed to stand alone as its own foundational statement and aspirational goal. In deciding upon a model to describe the levels of preservation, the DPTF reviewed two models, the National Digital Stewardship Alliance's (NDSA) "Levels of Preservation" and Preservica's (previously Tessella Technology and Consulting) "Digital Archiving Maturity Model."

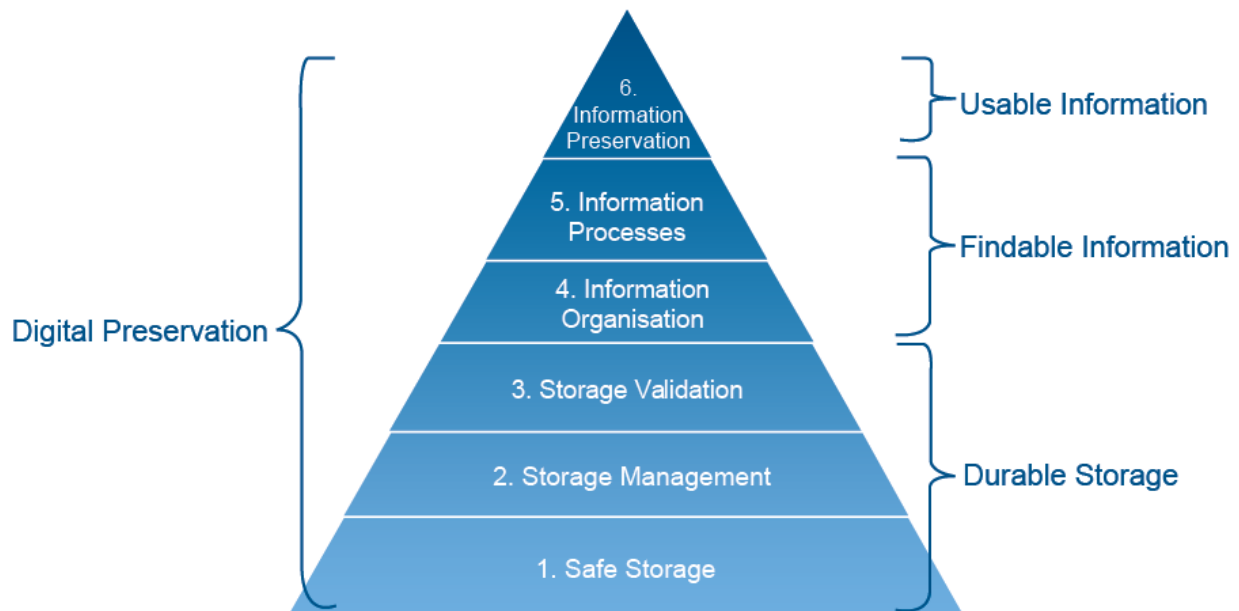


Figure 6: Preservica's Digital Preservation Maturity Model ©2014

The NDSA's "Levels of Preservation" is a matrix-model that addresses storage and geographic location, file fixity and data integrity, information security, metadata and file formats along a four level spectrum from protecting the data, knowing the data, monitoring the data and repairing the data.⁴³

Preservica's "Digital Archiving Maturity Model" (see Figure 6) is a pyramidal model that moves through six stages from safe storage to information preservation. The first three levels are about durable storage

⁴³ Trevor Owens, "NDSA Levels of Digital Preservation: Release Candidate One," *The Signal*, (November 20, 2012). <http://blogs.loc.gov/digitalpreservation/2012/11/ndsa-levels-of-digital-preservation-release-candidate-one/>.

and creating an environment in which the objects are preserved. The final three levels are meant to ensure the intellectual access and use of the objects.⁴⁴ In choosing to include Preservica's model, in the policy framework DPTF recognized that it more suitably describes the conceptual process of digital preservation, whereas NDSA's model serves as a more effective, actionable tool for implementing digital preservation. As such, the team placed the NDSA matrix in a "parking lot" for future consideration as part of implementing a digital preservation program within OSUL.

The Roles and Responsibilities section (see Figure 7) in the policy frameworks that the DPTF reviewed varied from generic statements to itemized list of functional roles. The team chose the route of an itemized list, however, unlike most policy frameworks OSUL's framework ties the roles to—and adapted the language from—those specified in the OAIS Reference Model.⁴⁵ The roles include producers, management, administrators, co-operating archives, consumers and user groups/client groups. Additionally, the team

OSUL has identified the following stakeholder categories for the digital preservation program. The terminology is adapted from the OAIS Reference Model (CCSDS 650.0-M-2 (2012))

- **Producer:** The role played by those persons or client systems that provide the information to be preserved. Producers include faculty, students, staff, alumni, collectors, creators of content, publishers, and others...
- **Management:** The role played by those who set overall OAIS policy as one component in a broader policy domain, for example as part of a larger organization...
- **Administrators:** Content stewards (designated staff responsible for selection and for ongoing curation of specific collections), digital preservation specialists and working teams (see appendix for list). Administrators will be responsible for the establishment of the digital preservation program and for day-to-day management of the digital archive(s)...
- **Co-operating Archives:** (OAIS definition) Those Archives that have Designated Communities with related interests... At OSUL we think of this group as collaborators.
- **Consumer:** The role played by those persons, or client systems, who interact with OAIS services to find preserved information of interest and to access that information in detail...
- **User Groups /Client Groups:** The various types of clients who use OSUL's digital collections.

Figure 7: OSUL Digital Preservation Policy Framework Roles and Responsibilities

⁴⁴ Preservica, *Digital Archiving Maturity Model*, (2012). <http://preservica.com/resource/present-ante-stiam-white-paper/>.

⁴⁵ Consultative Committee for Space Data Systems, *Reference Model For An Open Archival Information System (OAIS) Recommended Practice, Issue 2 CCSDS 650.0-M-2 Magenta Book*, (June 2012). <http://public.ccsds.org/publications/archive/650x0m2.pdf>.

created an appendix that further identifies specific administrator roles and responsibilities tied to OSUL positions. As such, the appendix can be modified without having to change the policy when there are organizational changes.

One section that was drafted, but ultimately left out of the policy framework, dealt with defining what a digital master is, as well as creating definitions for various derivative file types. While this is important to better understand and more effectively implement digital preservation processes, the DPTF determined that it was not policy, but the establishment of standards, which is part of the implementation process.

AUTHORITY AND BUY-IN: THE POLICY APPROVAL PROCESS

Based upon the feedback provided by the Task Force sponsors, the DPTF refined the draft of the policy framework, so that by early January, 2013, when two of the Task Force members attended the DigCCurr follow-up in Chapel Hill, they were able to report on progress of the policy framework development and seek feedback from the cohort and mentors. The progress report was well received and generated useful discussion to assist the team in completing the project. While the policy framework was not yet approved and adopted, and therefore not fully completed within the DigCCurr six-month timeframe, the DigCCurr follow-up meeting allowed the OSUL team to focus on what it would take to complete the project and begin to consider what would be necessary for implementing the framework.

A commitment to complete the policy framework was articulated in a second six-month plan, which included incorporating the feedback gathered at DigCCurr, presenting the draft policy framework to interested parties within OSUL and seeking their feedback, making final revisions to the framework and presenting it to OSUL Exec for final approval and adoption. Once adopted, there would need to be an awareness campaign to educate OSUL personnel regarding the policy framework. The team recognized that the “awareness” aspect would be the easier part of an implementation plan as it is a human resources issue. Identifying and creating a preservation environment is a hardware, software, monetary and human resource issue that will take a concerted organizational effort to strategize and implement.



Figure 8: Appendix A OSUL Administrators in the *Digital Preservation Policy Framework*

Over the next several months the DPTF members met with groups and individuals within the libraries to disseminate the draft policy framework and seek feedback. Specifically, the team met one-on-one with library personnel who were identified in the Administrators Appendix (see figure 8). This provided fresh insight as several of these individuals were new to OSUL. One administrator's particularly salient observation was that the framework was confusing because it began discussing a program, then it shifted into specific policy, and then broadened back out again to talk about a program. This individual asked, "Is the intended purpose of this document to layout [sic] a policy related to the program or to create a program to support digital preservation?"⁴⁶ In reality, it is neither. Within OSUL, staff view digital preservation as a collection of activities carried out by various programs throughout the libraries, not solely one program; nor is the policy framework meant to be program blueprint. To set the appropriate tone the group revised the language:

⁴⁶ Meris Mandernach, "RE: Draft Digital Preservation Policy Framework - input needed" email to Daniel Noonan, Tschera Connell and Peter Dietz, (April 9, 2013).

The primary intention of the digital preservation program is to preserve the intellectual and cultural heritage important to The Ohio State University, while at the same time making sure that it is accessible over time. The program's objectives are to...

to read

The primary purpose of digital stewardship and preservation is to preserve the intellectual and cultural heritage important to The Ohio State University, while at the same time making sure that it is accessible and held in trust for future use. The objectives in this statement define a framework to...

This change facilitates a framework within which the library is able to holistically approach digital preservation.

When the revisions were completed in June 2013, the final draft was presented to OSUL Exec for consideration and adoption. The policy was approved in August and assigned to the newly formed Strategic Digital Initiatives Working Group (SDIWG)⁴⁷ for ownership and implementation.

⁴⁷ The SDIWG is charged with broad responsibility in crafting the Libraries' policies and infrastructure to support the Libraries' strategic vision around digital initiatives aligned with the Libraries' collections, preservation priorities and information technology infrastructure and is chaired by Head, Digital Initiatives. Other members include Head, Digital Content Services, Head, Thompson Library Special Collections, Head, Application Development and Support, Head, Research Services, Head, Preservation and Reformatting.
<http://library.osu.edu/about/committees/strategic-digital-initiatives-sdiwg/>.

OTHER WAYS TO DO IT AND LESSONS LEARNED

The process The Ohio State University Libraries went through to create its *Digital Preservation Policy Framework*, while successful, is not the only one available to institutions and organization that are seeking to develop and adopt a digital preservation policy. There are several other models with which to consult, three exemplars being:

- Liz Bishoff’s “Digital Preservation Plan: Ensuring Long Term Access and Authenticity of Digital Collections” which identifies these eight components of a good digital preservation plan: Rationale for digital preservation, Statement of organizational commitment, Statement of financial commitment, Preservation of authentic resources and quality control, Metadata creation, Roles and responsibilities, Training and education, Monitoring and review⁴⁸
- ERPANET’s Digital Preservation Policy Tool which provides a framework to address Benefits of digital preservation, the Scope and Objectives of the policy, as well as Requirements, Roles and Responsibilities, Context, Areas of Coverage, Costs, Monitoring and Review, and Implementation of the Policy.⁴⁹
- JISC’s Digital Preservation Policies Study which provides a matrix for policy clauses that include a Principle Statement, Contextual Links, Preservation Objectives, Identification of Content, Procedural Accountability, Guidance and Implementation, a Glossary and Version Control.⁵⁰

⁴⁸ Liz Bishoff, “Digital Preservation Plan: Ensuring Long Term Access and Authenticity of Digital Collections,” *Information Standards Quarterly* Vol. 22, No. 2 (Spring 2010). pp. 21-22.

⁴⁹ ERPANET (Electronic Resource Preservation and Access Network), *erpa guidance – Digital Preservation Policy Tool* (ERPANET: September 2003), p. 3. <http://www.erpanet.org/guidance/docs/ERPANETPolicyTool.pdf>.

⁵⁰ Neil Beagrie, Najla Semple, Peter Williams, and Richard Wright, *Digital Preservation Policies Study Part 1: Final Report October 2008 A Study Funded by JISC*, (Higher Education Funding Council for England (HEFCE): October 2008), pp. 16-17.

http://www.jisc.ac.uk/media/documents/programmes/preservation/jiscpolicy_p1finalreport.pdf.

Digital Preservation Policy Framework at The Ohio State University Libraries: A Case Study

Figure 9 maps the Bishoff, ERPANET and JISC policy model components to those discovered by the OSUL Digital Preservation Policy Task in review of exiting digital preservation policies from various institutions. The ERPANET Model maps most closely to the policy framework that OSUL adopted.

OSUL Review	Bishoff	ERPANET	JISC
INTRODUCTION OR PURPOSE: A contextualization and articulation of the need for the policy.	Rationale for digital preservation	Benefits	Principle Statement
MANDATE: A statement that addresses legal, institutional and/or unit requirements to preserve digital objects.	Rationale for digital preservation	Requirements	Contextual Links
OBJECTIVES: A description of the intentions of an institution's or organization's digital preservation program, possibly tied into the organization's mission statement.	Statement of organizational commitment	Scope and Objectives	Preservation Objectives
SCOPE: A statement that establishes boundaries as to what the organization will preserve and more often than not establish priorities amongst various materials; examples include but are not limited to born digital, digitized with analog original, digitized without analog original, and commercially available digital materials.	Statement of organizational commitment	Scope and Objectives	Identification of Content
CHALLENGES: An identification and articulation of the challenges and risks associated with the process of digital preservation.	Requirements		
PRINCIPLES: A statement that addresses the values and philosophy by which an organization operates its digital preservation program.	Preservation of authentic resources and quality control and metadata creation	Areas of Coverage	
ROLES & RESPONSIBILITIES: An identification of the various roles in the digital preservation process; it may aggregate the roles at an institutional or unit within an institution level, establish group roles, or identify individual roles.	Roles and responsibilities	Roles and responsibilities	Procedural Accountability

OSUL Review	Bishoff	ERPANET	JISC
COLLABORATION: A statement that acknowledges that digital preservation is a shared community responsibility and identifies steps to be taken to cooperate and collaborate.		Context	
SELECTION & ACQUISITION: Criteria for materials to be preserved, tied to a repository’s collection development policy.		Areas of Coverage	Identification of Content
ACCESS & USE: A statement that addresses the concept of open access as well as levels of restriction; further, it addresses the likely inability to render the original digital artifact and that the effort will be made to deliver the best possible surrogate.		Areas of Coverage	
REFERENCES: A listing that identifies other standards and policies referred to within the policy document.			
GLOSSARY: A listing of terms as necessary.			Glossary
	Statement of financial commitment	Costs	
	Training and education		
REVIEW CYCLE: Included in OSUL policy, but found in only one policy during our analysis of other policies.	Monitoring and review	Monitoring and review	Version Control
IMPLEMENTATION: A concerning articulating the commitment to implanting the policy and the need to adopt standards, best practices and procedure. Included in OSUL policy, but not found during our analysis of other policies.		Implementation of the Policy	Guidance and Implementation

Figure 9: Comparison of OSUL DPTF Digital Preservation Policy Analysis to the Bishoff, ERPANET and JISC Models

The Bishoff and ERPANET models, have sections that specifically address the need for a statement of financial commitment and identification of infrastructure and human resource costs respectively. OSUL’s adopted policy is less direct in its language, addressing it in the Objectives, “The

objectives in this statement define a framework to...demonstrate organizational commitment through the identification of sustainable strategies...[and] develop a cost-effective program...” and in the Challenges, “The need for good cost models and affordable programs is widely acknowledged, yet still not fully addressed. OSUL requires sufficient funding for operations and major improvements for digital asset management, as well as designated library funding to sustain ongoing preservation efforts.”

One area that the Bishoff model addresses specifically that the OSUL policy framework does not is training. The ERPANET and JISC models both address the need to fund staff training, but do not discuss the need or importance of training in relation to the policy. OSUL initially discussed including a training and awareness campaign as part a more actionable implementation section, but ultimately left that task to the inheritors of the policy, the Strategic Digital Initiatives Working Group.

Clearly, OSUL benefited from the ability to dedicate three of its personnel to an immersive digital preservation experience, DigCCurr; however that does not mean that this is the only way to develop and implement a digital preservation policy. Whether an institution or organization—an archives or library, their parent institution and/or some other sub-division thereof—follows the same path as OSUL, utilizes one of the above models, or strikes out on its own course, they must recognize that the development of a digital preservation policy is an important exercise that cannot be accomplished overnight. To be successful in developing and adopting a digital preservation policy, OSUL’s Digital Preservation Task Force found that:

- Before embarking upon the drafting of a policy, understand the organization/institution’s current environment. Examine the organization/institution through the lens of Kenney and McGovern’s

Five Organizational Stages of Digital Preservation and/or Trustworthy Repositories Audit & Certification (TRAC) review.

- The process must be sanctioned by the institution's or organization's leadership.
- The policy must be developed at a conceptually high level that addresses what the policy entails and why it is important to the institution/organization, not how it is to be accomplished—that is an implementation matter.
- The policy must be developed with the input of those interested parties who will have to work within the parameters of the policy on a regular basis. Further, an awareness of the variety of biases within an organization is important in crafting of the language of the policy so there are little to no misunderstandings. Know your audience and recognize that there may be multiple audiences.
- It should be conducted by a multidisciplinary team, as digital preservation is a set of activities conducted by roles that cross many functions and disciplines within an organization. This may be hard for some institutions if all of those roles do not occur within the same organizational hierarchy or simply do not exist.
- The time it will take to accomplish drafting, discussing, revising, meeting with sponsors, meeting with interested parties, revising again and ultimately adopting the policy should not be underestimated. For many reasons—policy development may be a not team members' full time responsibility or number one priority; the inability to consistently schedule team meetings; the inability to schedule meetings with sponsors or interested parties in a timely manner; unexpected health issues or other emergencies—the process can be delayed.
- Understand that the policy is only part of the Organizational leg of a the Three-legged Stool and that to implement the policy the organization/institution needs to also consider the Technological Infrastructure leg and Resources Framework leg.

CONCLUSION:

During the policy framework drafting process, OSUL was clearly at Level 1 of the Digital Archiving Maturity Model “...safe storage – simple bit-level storage...with some level of reassurance that the bits are protected against simple storage failure.” While it could be argued that the Libraries had bits and pieces of the other five levels, those pieces did not have enough critical mass to warrant saying another level had been attained.

Becker and Rauber suggest that “While policies provide important guidance and set a framework for concrete planning, they do not provide actionable steps for ensuring long-term access...[and should not be confused with]... A preservation plan [that] specifies a specific, operational action plan for preserving a certain well-defined set of objects for a given purpose.”⁵¹ Therefore, in spring of 2014, a Masters Object Repository Task Force (MORTF) was “...charged with recommending policies, procedures, and best practices for managing the Libraries’ Master Objects Repository (MOR) and related storage services in alignment with the Libraries’ strategic plan and other related documents...” including the *Digital Preservation Policy Framework* document.

The work of the MORTF is intended to help establish an architecture that would begin to more fully address Levels 2 and 3 of the of the Digital Archiving Maturity Model, and begin to move OSUL more fully into the third (Consolidate: Seguing from projects to programs) and fourth (Institutionalize: Incorporating the larger environment) stages of Kenney and McGovern’s *Five Organizational Stages of Digital Preservation*. It has already addressed an issue that the Digital Preservation Task Force put in the “parking lot” that of defining digital masters. The *Master Objects Repository Task Force Report*⁵² is

⁵¹ Christoph Becker and Andreas Rauber, “Decision Criteria in Digital Preservation: What to Measure and How,” *Journal of the American Society for Information Science and Technology (JASIST)*, Vol. 62, No. 6 (June 2011). p. 1011. http://www.ifs.tuwien.ac.at/~becker/pubs/becker_decision_jasist_published.pdf.

⁵² The Ohio State University Libraries, *Master Objects Repository Task Force Draft* (May 2014)

recommending the adoption of a set of standardized definitions for preservation masters, provisional masters, derivative masters, working copies, access copies and reproduction copies. Further, there are various workgroups, task forces and personnel working on issues of identifying digital preservation formats and workflow standards. Therefore, the *Digital Preservation Policy Framework's* Implementation statement, "Implementation of this policy framework is contingent upon the infrastructure (technological and human resources) provided by Ohio State and OSUL, the availability of cost-effective solutions, the adoption of standards, and development of best practice and procedures." is being realized.

A successfully crafted and adopted digital preservation policy is a major accomplishment—it is an institution/organization putting a stake in the ground or drawing a line in the sand to say, "Digital preservation is important to us to be able to manage and provide access to our digital assets into an indefinable future. Further, we are going to conduct the preservation activity in a sound and systematic manner." It provides the framework to begin to develop an effective digital preservation program, but that is a case study for another day.