**Digital Preservation Assessment Report**

[Institution]

[City, State]

[Date of site visit]

Submitted on [Date] by:

[Name] [Title]

[Email address]

This report is based on materials produced by NEDCC and LYRASIS with the support of the National Endowment for the Humanities.

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EXECUTIVE SUMMARY[[1]](#footnote-1)

On DATE, the digital collections at the INSTITUTION were assessed for planning purposes by NAME, TITLE of COMPANY. The goals of the assessment were to document the state of digital preservation at the INSTITUTION, identify challenges and opportunities for improvement, and make recommendations for preserving the INSTITUTION museum’s unique digital collections. Observations and recommendations are based on a pre-visit questionnaire, a full-day site visit, and discussions with staff members.

[A brief overview of institutional history as it relates to digital collections] INSTITUTION began creating digital content in approximately 2003, beginning with photographs of art objects and expanding to digitization of Library collections in 2009. The Museum accessioned its first digital media artwork in 2011, and the Library began purchasing PDF’s from curators in 2013. The INSTITUTION’S Media Department creates time-based media of exhibits, interviews, and events. Since 2013, efforts to manage growing digital collections have developed across the Collection Services Department and Library, though these efforts have not been coordinated by an overarching strategy.

[Acknowledgment of recent activities or current practices] On the day of the visit, staff enthusiasm about and commitment to developing preservation practices and procedures was clear. It was also evident that many preservation practices up until this point had been developed by individuals in separate branches of the Department, and those individuals did not specifically have digital preservation as part of their official title or job duties. It is encouraging to see that recently the Museum had hired NAME as a Digital Asset Manager and formed the Digital Team to provide access to digital materials in the Museum. This practice of creating an explicitly titled role and forming a team of stakeholders across the institution is an excellent model for addressing digital preservation concerns. Hiring a digital preservation manager and forming a digital preservation team will help to ensure that policies and procedures are developed efficiently and implemented consistently.

As INSTITUTION continues to grow its digital collections and further develop its strategies to preserve them, it faces several challenges, including:

* [choose some larger obstacles or themes to highlight, such as these examples]
* The need to expand the recent restructuring of the Department to allow for a sustainable, interdepartmental approach to digital preservation;
* Lack of staff time and direction available for acquisition and preservation of digital collections, including electronic records;
* Lack of policies regarding the acquisition and preservation of digital materials, in particular digital media art and other born-digital items; and
* A history of ad-hoc, tools-oriented procedure implementation.

With these challenges in mind, efforts over the next 1-2 years should focus on:

* [choose some larger strategic themes to highlight, such as these examples]
* The creation of a digital preservation manager position for the Collection Services Department and organization of a digital preservation team;
* Prioritizing unique digital materials and digital media art from routine digital records created by the institution;
* Engaging in a strategic planning and policy process to support effective procedure development; and
* Revisiting job descriptions for all staff working with digitization and digital preservation.

In order to best care for digital collections, actions in the foreseeable future should focus on developing and implementing policies centered on digital preservation across the organization from a centralized team of stakeholders. Additional recommendations for procedural and strategic activities are made throughout this report.

I am glad to have had the opportunity to work with the INSTITUTION on this project. It was a pleasure to spend time with the staff and to learn about the various collections, and I look forward to assisting INSTITUTION with other initiatives. If this report has raised any questions, or if I can provide any additional information, please do not hesitate to contact me.

Respectfully submitted,

[Name]

[Title]

[email address]

INTRODUCTION

**A. Institutional Profile[[2]](#footnote-2)**

Established in YEAR, the INSTITUTION was formed through the consolidation of the INSTITUTION and INSTITUTION. With roots in these diverse and historically significant collections, INSTITUTION maintains and displays art from across the globe, including that of the Americas, Asia, and Africa. Owing to its unique legacy, it has a particularly robust maritime art and history collection as well. INSTITUTION also manages 10 historical buildings and thousands of manuscripts and bound volumes.

The manuscripts and bound volumes are retained by the INSTITUTION LIBRARY. Drawing from its roots as the legacy of the libraries of the INSTITUTION and INSTITUTION and containing the donated bound volumes and manuscripts of donors, the INSTITUTION Library possesses a rich collection of historical resources.

The Library and the Museum serve patrons and visitors from around the world and continue to devise new ways to access and experience their collections. In recent years, the Library has digitized a growing number of collections, and the Museum has begun to accession and exhibit digital media art. Since 2016, INSTITUTION has initiated exciting changes to the ways collections are managed at the Museum. NAME joined as the TITLE and the Director of the INSTITUTION LIBRARY, combining collection services and Library management for the first time in the Museum’s history. Developments such as these make an assessment of digital preservation practices timely and appropriate for the Museum as it continues to develop its collection management practices in both the Library and Museum.

**Digital Collections**

In approximately 2003, INSTITUTION began creating digital content in the Museum through photographs of art objects. The rate with which digital collections were created expanded rapidly around 2009 as the Library began to digitize materials and more Museum collections were photographed. In approximately 2011, the Museum and Library began to collect a variety of digital resources as well; in 2011, the Museum accessioned its first digital media art, ArtTitle, which was a site-specific projection installation created for the Museum using digitally imaged items from the Library’s collection, and the Library began to purchase PDF’s from curators in 2013. Additionally, INSTITUTION formed the Media Department in 2011, which creates time-based media of exhibits, interviews, and events, further augmenting the variety and quantity of digital content managed by INSTITUTION.

**B. The Digital Preservation Assessment**

**Definitions**

For the purposes of this report, digital preservation is defined as follows: “Digital preservation combines policies, strategies, and actions to ensure access to reformatted and born digital content regardless of the challenges of media failure and technological change. The goal of digital preservation is the accurate rendering of authenticated content over time.”[[3]](#footnote-3)

Throughout the report, the word “staff” is used to indicate anyone responsible for collections care, whether they be professional staff, interns, volunteers, or some combination thereof.

**Process**

The goals of the assessment were to document the state of digital preservation at the INSTITUTION, identify challenges and opportunities for improvement, and make recommendations for preserving the museum’s unique digital collections. The following report is based on a pre-visit questionnaire, meetings with digital preservation stakeholders during the visit, and follow-up correspondence with the following library staff:

* NAME, TITLE
* NAME, TITLE
* NAME, TITLE

The objectives of the Digital Preservation Assessment are to:

* Evaluate institutional policies and procedures as they apply to digital preservation;
* Review digital collections management for preservation outlook, including intellectual control;
* Review digitization and digital preservation policies;
* Evaluate roles and responsibilities of staff affecting digital preservation, and
* Assess the current digital collections for risk of loss and recommend mitigation strategies.

**Report**

This report is intended for continuing reference by this institution and its staff. Each section includes observations and recommendations; recommendations are bulleted and in bold type. Staff members are likely to change over time, but this report can be used for several years as a roadmap to priorities and as a foundation on which to build a digital preservation program. Over time, as digital collections evolve and preservation projects are accomplished, another assessment may be needed to identify new priorities.

I. THE ORGANIZATION

**A. Organizational Structure**

Creating and caring for digital materials and collections over time poses significant challenges and requires a commitment across departments and in all levels of the organization. Having an organizational home for strategic direction is a key first step towards responsible stewardship of digital materials.

An authoritative body that can prioritize and achieve short- and medium-term goals is important for any organization-wide program; however, the special challenges posed by digital preservation make having a centralized decision-making group even more important. The inherent interdisciplinary approach required—involving input from every group of stakeholders, from IT services to end-users—and the multi-level decision making that underpins launching and managing a new program makes isolated efforts unsustainable.

***Observations & Recommendations***

[See Section I:B of this template for an example of Observations & Recommendations]

**B. Designated Community**

The concept of the Designated Community was developed and refined in the OAIS reference model and has become an important facet of planning for preservation, whether of digital or physical collections.[[4]](#footnote-4) Drafting a Designated Community Statement that describes users by their knowledge, interest, location, demographics, or other characteristics provides an underpinning for collection management, selection, and access decisions and supports a consistent approach to resolving new problems as they arise. Knowing whom an institution serves is just as important as knowing what objects and programs it manages for its users.

***Observations & Recommendations[[5]](#footnote-5)***

The INSTITUTION has a broad understanding of the community it serves. As a public library, the most obvious and central group of users is made up of local residents who rely on the library for services related to education, assistance, entertainment, and community engagement. The Special Collections has a traditional research library collection that is regularly exhibited, but the specific groups of users that are most interested in this collection are not as defined as are they are for the circulating collection.

The digital collections are an extension of the Special Collections, and staff have an uncertain understanding of the user community that engages with these collections. It became clear during the site visit that a major challenge in articulating a vision, and therefore a plan, for the digital collections is this lack of clarity. Without an investigation of the current and potential users for both the broader Special Collections and the digital collections, it will be difficult to plan for the growth of the collections and develop services for these groups over time.

A Designated Community Statement and the data that underpins it will have a demonstrable impact on the planning of digital preservation and access services, and it will be extremely valuable in articulating an overall strategy for the library.

* **Early in the digital preservation planning process there should be an information-gathering stage which helps identify various user groups. Surveys, focus groups, use statistics, and other sources may be used or combined to gather this information.** 
  + As INSTITUTION is a very large institution with vast collections, it may be best to hire a market research consultant to plan and facilitate this project.
* **Draft a Designated Community Statement, taking into account the different user groups that make up INSTITUTION’S constituency.** Much like a mission statement, a Designated Community Statement can be revised on occasion, but it will generally be a stable foundation on which to build and evaluate programs. Unlike a mission statement, a Designated Community Statement can be an internal planning document, rather than a public statement. Both external and internal users of collections, as well as organizational partnerships, should be considered.
  + A sample designated community statement that addresses both internal and external users can be found at Indiana University: <https://wiki.dlib.indiana.edu/display/DIGIPRES/Designated+Community>
  + The statement should eventually be accompanied by guidance for how the community will be engaged in decision-making processes during the feasibility and planning stages for digital preservation.

II. STAFF AND RESOURCES

**A. Staffing and Roles**

A sustainable digital preservation program requires staff to perform digital preservation activities as a part of their everyday work. In practical terms, this means formalizing those obligations in staff job descriptions and work plans, as well as giving adequate time to do this work and implement inevitable changes.

It is common for staff at a variety of types of institutions to adopt digital preservation activities in an ad hoc manner as digital collections grow, both leaving gaps as well as creating areas of overlap. At times it can be difficult to determine whether certain responsibilities should be managed by collections staff or IT services. A digital preservation manager, or a digital preservation team that manages the program together, will ensure coordinated and sustained preservation of digital collections and will be responsive to changes in strategic direction over time.

***Observations & Recommendations***

**B. Staff Training and Community of Practice**

Digital preservation is an ever-evolving and relatively new area of expertise for institutions collecting cultural heritage material. As newer technologies develop, staff at these institutions must stay current with the latest developments in digital preservation. General conferences and continuing education courses can be helpful for benchmarking programmatic progress or learning about emerging trends. In order to gain practical skills and learn approaches that will work locally, attending more focused conferences, tools-based workshops, and user group meetings might be most useful. Professional development should not be seen as a privilege for individual staff members but rather as a rational approach to closing skills gaps in order to meet an institution’s strategic goals.

Not only is advocacy across an institution vital to digital preservation success, but finding and creating communities of practice has also been proven to be a successful tool for digital preservation planning.[[6]](#footnote-6) A community of practice is a group of institutions that collaboratively works towards furthering its digital preservation knowledge and practices. Developing these peer networks can help staff collaboratively solve and strategize about common problems in different environments; collaboration may offer opportunities to review the success and challenges of implementing certain digital preservation or content management tools and to connect with staff in similar roles in different types of organizations.

***Observations & Recommendations***

**C. Budgeting and Resources**

Storage, access, and other ongoing digital preservation activities require budgetary support. Expenditures for software, hardware, and services are a consideration for both the near-term, beginning phase of establishing a digital preservation strategy, and for the long-term, ongoing maintenance of a digital preservation program. Because digital preservation costs, such as subscription services or cloud storage, are ongoing, it is difficult to support digital preservation activities with one-time grant funding, making an ongoing commitment through operating funds vital. A regular budget allocation for digital preservation costs helps sustain digital preservation efforts by providing a known funding source for maintenance, hardware upgrades, and a digital asset management system to access collections. Often, in an institution with digital collections, significant expenditure is already present but is hidden in IT or other budget lines that have grown without specific planning for digital preservation. Identifying these costs can help provide a realistic budget for the current program and plan for growth.

***Observations & Recommendations***

III. POLICY INFRASTRUCTURE

**A. Mission and Strategic Planning**

As with all programs and services, creating an effective and sustainable digital preservation program begins with reviewing the mission of the organization. It is not a foregone conclusion that a collecting institution will commit to preservation as a central function; naming this commitment in a mission statement and other guiding documents is the best way to ensure the future of the collections no matter their format.

In addition to a strong mission statement, a strategic plan for digital collections ensures that projects follow a cohesive direction and that the program builds on success over time. Whether a plan for digital preservation is included in an institution-wide strategic plan or as a standalone plan just for the collections, it should describe the organization’s vision and goals for digital collections. As with all strategic planning, the process should be transparent, include all the stakeholders within the institution, and be reviewed at a regular interval.

***Observations & Recommendations***

**B. Digital Preservation Policies**

Digital preservation is best guided by a policy document, or set of documents, drafted and adopted at the administrative level. These policies provide consistency across an organization over time; communicate decisions and procedures for ongoing activities, and serve as an important record of decision-making for future stakeholders. The following policy areas are important but do not make up an exhaustive list. Organizational planning and staff professional development will reveal other areas that require policy development.

**1. Collection Development**

Physical collections are best acquired by relying on a written collection development policy, and digital collections are no different. A digital collection development policy specifies what subject, formats, or other areas of focus an institution primarily collects. In addition to serving as a guiding document for staff, digital collection development policies also constitute a mandate for digital preservation when approved by an organization’s administration. As with other policies that support digital collections, this policy may approach digitization priorities and born-digital acquisition separately or in a single document. Basing a collecting focus on the mission and community needs of the organization will ensure that the collections remain a priority for investment into the future.

***Observations & Recommendations***

**2. Selection for Digitization**

Because digital preservation requires planning and investment over time, it is important to be selective about the digital objects that are brought into the collections that are designated for long-term preservation. The volume of born-digital and digitized materials only continues to grow, and making informed decisions about what to accession into digital collections is important for maintaining long-term access. While digital storage has become less expensive over time, there are long-term costs for storing and maintaining digital materials.

*Born-digital* *collections* require specific considerations for selection. It is important to consider the item’s value to the collection, as well as the technical resources at hand for preservation. A selection policy that addresses born-digital materials can be amended over time, as the organization and staff gain capacity.

Selection policies should address *digital surrogates* as well. Individual scans created at a reference desk may not be worth maintaining in a preservation environment, but digital images created to serve as a faithful representation of the analog original as well as reformatted audiovisual materials are usually worthy of long-term preservation.

***Observations & Recommendations***

**3. Preservation Plans**

Just as understanding the vulnerabilities of physical formats leads to specific preservation planning for analog collections, a growing understanding of the vulnerabilities of digital collections should lead to specific preservation planning for digital materials that goes beyond a one-size-fits-all data backup approach. Redundant copying, storage architectures, and metadata are just some of the strategies used to preserve different types of digital objects according to their specific needs. Born-digital objects and video content may require different long-term approaches than other, simpler materials. Normalization and migration are practices that might be appropriate for certain digital objects.

Not every organization needs or has the ability to create preservation plans for all collections in their care at once. Expertise and policy adoption will develop time, and the goal should be to get all items selected for permanent digital collections into a preservation environment managed at the institutional level.

***Observations & Recommendations***

IV. PROCESSES AND WORKFLOWS

**A. Content Creation**

Digital collections may be created through digital reformatting, or through regular business or artistic creation. As in preservation of physical collections, knowing how a digital file was created and understanding its risks helps inform preservation decisions throughout its lifetime. Oftentimes a collecting institution can determine or advise in the creation of digital objects in order to make it easier to preserve them in the future. These determinations should be guided by standards informed by best practices to ensure that policies are implemented consistently and serve the institution’s goals for preservation.

**1. Reformatting**

***Observations & Recommendations***

**2. Born-digital Objects**

***Observations & Recommendations***

**B. Metadata**

Metadata is information that assists in the discovery and preservation of digital objects. While many cultural heritage institutions have focused on providing good descriptive metadata to ensure access to digital materials, it is also important to include technical, administrative, and preservation metadata. Following standards set by the library and archives fields regarding these types of metadata demonstrates authenticity and transparency and follows best practices.

Metadata is also maintained as a digital object. It may be stored in the form of an XML document, within a Digital Asset Management System, as a spreadsheet, or in other formats. Preserving this information and its connection to the digital files will help people in the future understand the digital collections. Institutions frequently invest significant time and effort in creating descriptive metadata for digital collections, and that investment should be valued and protected by maintaining the metadata itself along with the digital collections.

***Observations & Recommendations***

**C. Documentation**

Several areas in this report reference developing written drafts of policies and procedures. Documentation -- the internal recording of decisions, commitments, procedures, and practices in a work setting -- is one of the most critical activities stewards of digital collections engage in. Regardless of what particular decisions are made in the course of preservation, documenting procedures and decision-making processes will help future employees take the correct preservation actions when they are required.

***Observations & Recommendations***

V. TECHNOLOGICAL RESOURCES

**A. IT Support**

Support for digital preservation requires collaboration from collections staff to identify materials to preserve and from IT to provide some of the storage support required to monitor materials over time. This relationship is similar to physical storage environments. Physical collections need specialized knowledge from collections staff to implement best practices for storage, care, and handling, but also require facilities staff’s expertise to monitor and service the HVAC or other controls for the physical environment. Digital materials still need the specialized knowledge to select, store, and monitor materials from collections staff, and IT staff’s expertise to contribute to the design and implementation of the approaches.

***Observations & Recommendations***

**B. Legacy Media**

Legacy carriers are media that are no longer widely used, but were once popular for sharing or storing digital content. This includes CDs, flash drives, zip drives, floppy disks, and more. Legacy media present specific risks to the digital collections they carry. As these media become obsolete, institutions will find it increasingly difficult to extract their contents and move them to more stable storage solutions. Additionally, materials on legacy media are difficult to monitor, backup, and manage given that they need to be manually connected to a computer to be accessed. This makes the collections on legacy media at an increased risk of loss. Given these shortcomings, institutions should work quickly to identify and transfer materials on legacy media for incorporation into a higher quality storage environment.

***Observations & Recommendations***

**C. Data Management Tools**

When preserving digital collections, software tools are necessary to manage the digital objects being stored. The ultimate goal should be a set of tools and configurations that automates preservation activities as much as possible and does not cause undue burden on staff time. Depending on the tools used, these software tools help keep metadata associated with their objects, add or remove metadata, keep track of master files, automatically generate access files, run reports on objects or collections, make and store redundant copies of master files, and other preservation tasks. There are many approaches to configuring a computing setup that achieves organizational goals, and one size does not fit all.

***Observations & Recommendations***

**D. Digital Storage**

Digital storage for preservation involves more than just identifying space on a server and performing regular backups. Storing digital materials marked for preservation involves redundant, managed storage, where copies are isolated from each other and regularly monitored for fixity and file integrity. Simple backups are insufficient for preservation, because they involve disk images that copy mistakes and data corruption without detecting these issues. When files are managed in a preservation storage environment, these files are regularly monitored for such mistakes and ideally stored in many locations to minimize risk.

Digital collections do not need to be collocated onto a single type of storage device, or a in a single storage arrangement. But the devices used should be able to be connected to software tools that can help manage their integrity over time, including authentication of staff who should have access to original objects.

***Observations & Recommendations***

**E. Security of Collections and Authenticity of Users**

Authenticity is the concept of providing access to primary source material that is authentic and reliable. Authenticity has been identified as part of the Core Values of Archivists, as adopted by the Society of American Archivists.[[7]](#footnote-7) Unlike analog materials, it is not obvious when a change to a digital object has occurred, so it is important to adopt a risk management strategy that takes this fact into account. Tightly controlling access to master files, logging that access, and recording any intentional changes to objects (such as any movements or preservation actions taken) are good ways to manage the risk of inadvertent changes or deletions.

Generating and reviewing checksums, a process also known as fixity checking, is a standard way to verify whether an item has changed during transfer or storage. A checksum is a unique string of characters that is associated with the file in its exact iteration at the time of the checksum’s creation. If the file changes at all, and a checksum is generated again, then the original checksum and the new checksum will not match. If a file stays the same, the checksum generated will remain the same. Running checksums and storing them with files is an important part of risk management, but it is not a replacement for well-thought-out access and permissions policies. Developing these policies is often a higher priority than instituting technical fixity workflows.

***Observations & Recommendations***

CONCLUSION[[8]](#footnote-8)

Staff at the INSTITUTION clearly demonstrate a passion and a drive to steward digital collections moving forward. Staff have worked hard to formalize practices where possible and work closely with the IT Department to develop storage solutions for growing digital collections. Staff in the Library and the Museum also recognize their challenges going forward. In a large department with multiple branches, preservation practices and policies have been developed in isolation of one another, and many official titles and job duties have not been updated to include digital preservation activities already taking place. Staff understand that, moving forward, it will be important to develop policies and procedures in a more centralized fashion.

The decision to pursue a digital preservation assessment attests to an interest in improving the long-term outlook for digital collections, and if this report spurs the development of a robust preservation program to match the vision held amongst the museum staff and board, the INSTITUTION’S digital collections will be much more sustainable into the future.

[Repeated from Executive Summary] As INSTITUTION continues to grow its digital collections and further develop its strategies to preserve them, it faces several challenges, including:

* [choose some larger obstacles or themes to highlight, such as these examples]
* The need to expand the recent restructuring of the Department to allow for a sustainable, interdepartmental approach to digital preservation;
* Lack of staff time and direction available for acquisition and preservation of digital collections, including electronic records;
* Lack of policies regarding the acquisition and preservation of digital materials, in particular digital media art and other born-digital items; and
* A history of ad-hoc, tools-oriented procedure implementation.

With these challenges in mind, efforts over the next several years should focus on:

* [choose some larger strategic themes to highlight, such as these examples]
* The creation of a digital preservation manager position for the Collection Services Department and organization of a digital preservation team;
* Prioritizing unique digital materials and digital media art from routine digital records created by the institution;
* Engaging in a strategic planning and policy process to support effective procedure development; and
* Revisiting job descriptions for all staff working with digitization and digital preservation.

I am glad to have had the opportunity to work with the INSTITUTION on this project. It was a pleasure to spend time with the staff and to learn about the various collections, and I look forward to assisting INSTITUTION with other initiatives. If this report has raised any questions, or if I can provide any additional information, please do not hesitate to contact me.

Respectfully submitted,

[Name]

[Title]

[email address]

APPENDICES

[Add any appendices that are needed to assist the institution with implementing the recommendations.]

1. This is an example of an Executive Summary. Information about the institution included here should be drawn from, and less detailed than, the institutional profile in the Introduction section of this report. [↑](#footnote-ref-1)
2. This is an example of an Institutional profile as a part of the Introduction. An edited version of this profile should be included in the Executive Summary. [↑](#footnote-ref-2)
3. Definitions of Digital Preservation, Association for Library Collections and Technical Services, <http://www.ala.org/alcts/resources/preserv/defdigpres0408> [↑](#footnote-ref-3)
4. *ISO 14721:2012 Space data and information transfer systems -- Open archival information system (OAIS) -- Reference model*, International Organization for Standardization, [*https://www.iso.org/standard/57284.html*](https://www.iso.org/standard/57284.html) [↑](#footnote-ref-4)
5. This is an example of an Observations & Recommendations section. [↑](#footnote-ref-5)
6. “From Theory to Action: Good Enough Digital Preservation for Under-Resourced Cultural Heritage Institutions,” <http://commons.lib.niu.edu/handle/10843/13610> [↑](#footnote-ref-6)
7. *SAA Core Values Statement and Code of Ethics*, Society of American Archivists, [*https://www2.archivists.org/statements/saa-core-values-statement-and-code-of-ethics*](https://www2.archivists.org/statements/saa-core-values-statement-and-code-of-ethics) [↑](#footnote-ref-7)
8. This is an example of a Conclusion section. [↑](#footnote-ref-8)