

Planning a Digitization Project

Historical societies, museums and archives contain an assortment of analog material such as paper, film and three-dimensional objects. Digital imaging technology has changed the way many organizations collect, store, and disseminate information about this material. We can now convert materials in our collections to a digital format with cameras and scanning equipment, which allows greater access to once unattainable information about people, places and events. This technology also minimizes handling of rare and fragile materials.

Successful digitization projects require effective planning, collaboration and long-term financial investment. Staff and volunteers should work together to develop digitization policies that embody the mission and goals of the institution. This Bulletin outlines how to plan a digitization project, including assessing the risks, costs and technology involved.

Where do we begin?

A digitization project should focus on the creation and long-term management of high-resolution digital surrogates. Think of a surrogate as a digital representation of analog material that you can access, copy, and convert to other digital formats

for use in educational programs and exhibits; for print materials like brochures about your organization and its activities; and for social media use in places like Facebook.



Hood River Horticulture Fair, image scanned from 5x7 black and white glass negative. Courtesy of the History Museum of Hood River County.

Before undertaking a digitization project, an institution should determine which analog collections to scan based on a variety of factors. For example, are there items (artifacts, photographs, documents) that would benefit from digitization? Consider placing a priority on digitizing items that have major preservation concerns, such as damaged or deteriorating film negatives. When handled improperly, deteriorating nitrate film can cause respiratory or skin problems. The goal should be to limit frequent handling. This will benefit not only the artifact, but the user as well. You might also place a priority on historically valuable information. What material does

the public request most often? Do some materials contain information about the local community? Would scanning frequently requested items provide an income for reinvestment into furthering your digitization project(s)? Remember, the more material selected for digitization, the longer the project will take and the more costly it will become.

Consider the risks

Stewards of cultural heritage should consider the risks associated with a digitization project. One area of risk relates to the copyright status of items found in your collection. Works published in the United States prior to 1923 (or before 1964 and not renewed) are in public domain and available for digitization. On the other hand, an institution does not have the right to digitize and virtually reproduce copyrighted material. There is further information on this issue under Recommended Reading at the end of this bulletin. In cases where ownership of an item is unclear, it is a good idea to consult with an attorney who specializes in copyright or intellectual property.



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Explore the costs

A digitization project includes initial and on-going or sustaining costs. Exploring both phases is important when defining short and long-term funding. The initial phase involves the purchase of scanning equipment and computer software with image-editing capabilities. It also includes the scanning process, which takes time and consists of several steps. Some organizations find outsourcing more cost effective than conducting an in-house digitization project for large collections.

QUESTIONS TO CONSIDER WHEN PLANNING FOR IN-HOUSE OR OUTSOURCING DIGITIZATION PROJECTS:

- Who will work on the project?
- How large should the project staff be?
- If we contract the digitization project, what qualifications are we looking for? How much experience should the individual(s) possess? If we outsource to a vendor, what are their qualifications and experience?
- Based on our initial appraisal of the collection, how long should the project last?
- Are we willing to invest time and money into training staff or volunteers to complete and sustain the project?
- Are we prepared to budget for the ongoing costs of digitizing and preserving source material?

An advantage to conducting projects in house is the ability to maintain control of the collection. In-house projects require experience and

knowledgeable staff. Conducting in-house projects enables gradual learning as the project moves forward for inexperienced staff or volunteers new to imaging and digital preservation techniques. However, even though the “learn by doing method” might seem like the most cost-effective route at first, there are drawbacks to this system. If your institution lacks experience working with digital imaging technology as well as long-term digital preservation curation techniques, learning on the fly will increase time and costs of the project. It might be wise to hire an experienced individual to design and implement a digitization and curation program and services. The staff’s lack of knowledge and experience with technology might prove detrimental to the collection. Furthermore, not handling all aspects of the project correctly in the first place may result in your spending more money fixing mistakes later.

Sustaining costs include the purchase of large capacity external hard drives to store high-resolution images. An alternative is an annual subscription for housing images online (cloud storage). The more images scanned, the more storage you will need for the master digital files. You will also want to invest in a content management system. It will keep your digital collection organized and provide a way to track the use of your media in a variety of different formats.

Grants are available to help offset the cost of purchasing equipment for digitization projects. Visit the Institute of Museum and Library Services website for available grants by name, institution or project type or visit the

Oregon Heritage Grants website (see the Funding Resources section of this Bulletin). Most funding organizations look for plans that describe the initial phase of a project and its long-term sustainability. Be prepared to describe the outcome of your digitization project. Include information about image access and anticipated types of use. Ask yourselves, “Are there materials in our collection often requested and used by the local community? Are there other organizations in our town or region willing to collaborate with us on our digitization project?” Efforts of this type often result in sustainable financial investments and rewarding long-term partnerships.

Review the technical aspects of equipment, software and training

Purchasing the right equipment for your project can be difficult. Your organization should weigh the costs of purchasing scanning hardware and software with the needs of its collection.



A typical station will include the computer, keyboard, mouse and monitor; scanner (to the right) and external storage (to the left). Image courtesy of Matt Carmichael and the History Museum of Hood River County.



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WHEN SELECTING THE RIGHT SCANNER ASK YOURSELF THESE QUESTIONS:

- What types of physical objects do we plan to scan?
- Do we want to scan paper records and photographs?
- What type of continuous tone images are in the collection (negatives, slides, transparencies)?
- Do we want to scan low or high resolution images?
- What type of storage will we invest in, local (external hard drives) or networked (cloud storage)?
- Will we apply for a grant?
- Do we plan to hire a trained individual, or teach ourselves as we go?
- If we outsource our project to a vendor, how we will package and ship our collection?
- What are the costs and risks involved?

Implement a digitization policy

Your organization’s collections management policy provides guidance for the long-term care of the treasures in its trust. When considering the cost of digital conversion, remember to include the long-term measures necessary to care for your new digital collection(s). Your staff and volunteers should work together to develop digitization policies that embody the mission and goals of their institution. The policy should contain the following:

- Primary Policy Aims
- Benefits
- Risk Assessment

- Needs Statement
- Scope and Objectives
- Legal, Financial and Technical Requirements
- Roles, Responsibilities and Personnel
- Costs and Financial Commitments
- Monitoring and Reviewing of the Policy
- Implementation of Policy



Kresse Drug Store image, circa 1900, scanned from a 5x7 black and white glass negative. Courtesy the History Museum of Hood River County.

Policies are organic and must adapt to the needs of the organization and its users. Digitization involves a long-term investment; plan your digitization policies to reflect this commitment. Points to consider: What are the needs, goals and mission of our institution? What are the needs of our institution’s stakeholders? Is our institution prepared to curate over one terabyte of information indefinitely?

When you’ve finished planning your project and defining its policies, you will be ready to learn about the basics of processing digital images. Heritage Bulletin 22 includes information about a step-by-step process known as a workflow and provides a glossary of terms for digitization projects.

The bottom line

Each organization will have different expectations and needs regarding which hardware and software to purchase for its digitization project. If your organization has limited staff, budget and resources, it is wise to seek guidance to prevent mistakes down the road. Digitization projects require an understanding of more than just the mission, goals, and needs of the organization and its assets. They require technical knowledge of imaging hardware and software, operating systems, file management, local and network storage, etc. Before starting a digitization project consult with individuals who have experience with digital imaging technology. Seek guidance through professional associations such as the Society of American Archivists, American Alliance of Museums, Association for Information Science and Technology, Association of Information Technology Professionals, as well as the National Consultants Referral Service. You can also seek advice from social media websites like LinkedIn, Flickr, and Twitter.



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Experimental Station, 1915, scanned from 5x7 black and white glass negative. Courtesy of the History Museum of Hood River County.

Funding Resources

- Oregon Heritage Grants
<http://www.oregon.gov/oprd/HCD/FINASST/Pages/grants.aspx>
- Institute of Museum and Library Services (IMLS)
http://www.ims.gov/applicants/available_grants.aspx

Digital Imaging and Preservation Resources

- The Getty's Introduction to Imaging provides information for project planning, quality control, networks, systems and architecture. It can also help you select the right scanner.
http://www.getty.edu/research/publications/electronic_publications/introimages
- Cornell's Digital Imaging Tutorial provides excellent training, introducing key concepts and exploring digitization techniques such as selection, conversion, metadata and preservation.
<http://preservationtutorial.library.cornell.edu/contents.html>

- Cornell also offers a Digital Preservation Management resource which addresses issues such as technological obsolescence. http://dpworkshop.org/dpm-eng/eng_index.html
- The School of Information at the University of Texas' Digital Imaging Basics provides a basic resource for image production and file management.
https://www.itma.vt.edu/courses/digmed/resources/digital_imaging_basics.pdf
- Heritage Bulletin 22: Implementing a Digitization Project
http://www.oregon.gov/oprd/HCD/docs/Heritage_Bulletins/HB22_Digitization_Projects_Implementation.pdf

Recommended Reading

- Dale, Robin L. (2007). *Outsourcing and vendor relations*, Northeast Document Conservation Center Leaflet Series on Reformatting
<http://www.nedcc.org/free-resources/preservation-leaflets/6.-reformatting/6.7-outsourcing-and-vendor-relations>

- Sitts, Maxinne K. (Ed.). (2000). *Handbook for digital projects: a management tool for preservation and access*, First edition. Andover, MA: Northeast Document Conservation Center
<http://www.nedcc.org/assets/media/documents/dman.pdf>
- Stanford University (2010) *Copyright and Fair Use Overview*
http://fairuse.stanford.edu/Copyright_and_Fair_Use_Overview/index.html
- U.S. Copyright Office (2021). *Copyright Law of the United States and Related Laws Contained in Title 17 of the United States Code*
<https://www.copyright.gov/title17/>

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