

GETTING STARTED WITH DIGITAL COLLECTIONS

SCALING TO FIT YOUR ORGANIZATION

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An imprint of the American Library Association
CHICAGO / 2017

www.alastore.ala.org

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ISBNs

978-0-8389-1543-1 (paper)

978-0-8389-1545-5 (PDF)

978-0-8389-1546-2 (ePub)

978-0-8389-1547-9 (Kindle)

Library of Congress Cataloging-in-Publication Data

Names: Monson, Jane D., 1977- author.

Title: Getting started with digital collections : scaling to fit your organization / Jane D. Monson.

Description: Chicago : ALA Editions, an imprint of the American Library Association, 2017.

Identifiers: LCCN 2016047208 | ISBN 9780838915431 (pbk. : alk. paper) | ISBN 9780838915455 (PDF) | ISBN 9780838915462 (ePub) | ISBN 9780838915479 (Kindle)

Subjects: LCSH: Digital libraries—Management. | Small libraries—Administration. | Library materials—Digitization. | Metadata. | Digital libraries—Collection development. | Copyright and digital preservation. | Digital preservation.

Classification: LCC ZA4080 .M66 2017 | DDC 025.8/4—dc23 LC record available at <https://lccn.loc.gov/2016047208>

Book design by Kimberly Thornton in the Brandon Grotesque and Utopia typefaces. Cover images: Adobe Stock.

© This paper meets the requirements of ANSI/NISO Z39.48-1992 (Permanence of Paper).

Printed in the United States of America

21 20 19 18 17 5 4 3 2 1



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THE IMMENSE CHANGES BROUGHT ABOUT BY THE DIGITAL REVOLUTION ARE still relatively recent in the collective memory, and most of us can recall a time when libraries, archives, and museums were strictly places to be visited, physical destinations first and foremost. Now that the Digital Age is well underway this reality has shifted, as these institutions are able to harness the Internet to bring their collections directly to users, wherever they may be. Once novel, this level of service has become the expectation of a public that is accustomed to having all manner of information at its fingertips at all times.

Even for the largest cultural heritage institutions, this expectation can be difficult to meet—many have been digitizing materials for years and have yet to make much of a dent in their overall holdings. But smaller institutions face a unique challenge. They may have been unable to jump on the digitization bandwagon at its beginning due to competing priorities or lack of resources, and are now struggling to get a digitization program in place to meet the evolving needs and expectations of their own users. The larger digitization conversation, which has centered mainly around the larger institutions, has now progressed to the point that a novice will have trouble wading through news of the latest innovations and acronyms to piece together the basic knowledge they need to get started.

As a graduate student in library and information science, I was lucky enough to receive a comprehensive education in digitization fundamentals through a specialized curriculum that included hands-on project work in a well-established digitization program at a large academic library. This experience gave me the ability to step into a position as a solo digital librarian at a small academic institution that was starting a brand-new digitization program from scratch. But administrators at many smaller institutions cannot, and perhaps do not want to, hire a designated digitization professional to oversee the creation of their first digital collections. And frankly, they don't need to. Non-experts can accomplish the task just as successfully when equipped with some fundamental knowledge and the right tools.

As with many endeavors, the hard part is often figuring out where to start. This book provides an entry point for librarians, archivists, and curators who are new to digitization. It aims to assemble in one place the key information necessary to get a digitization program off the ground. It focuses on the needs of professionals at small and midsize cultural heritage institutions who do not have previous experience with digital collections and who may be working with limitations related to money, staffing, and technology. The book is divided into two parts: "Managing Projects," which provides strategies for completing digitization projects at smaller institutions, succeeding as a solo digital collections manager, and working collaboratively both within and outside your institution; and "Basic Skills," which defines important terminology and outlines best practices for digital image conversion, metadata creation, hardware and software selection, copyright compliance, and digital preservation.

This book is also meant to be a jumping-off point for further learning, since no single volume can provide you with all the information you may need or want to know. After reading it, my hope is that you will have a strong grounding in digitization fundamentals, as well as a solid grasp of the resources available to assist you as you move forward.

Jane D. Monson

PART I

MANAGING PROJECTS





DIGITIZATION AT SMALLER INSTITUTIONS

DIGITIZATION HAS BEEN ONE OF THE MOST FREQUENTLY USED buzzwords in the cultural heritage sector since the early twenty-first century, when the activity really began to take off in libraries, archives, and museums. While well-funded, cutting-edge institutions started their nascent digitization programs in the 1990s, it wasn't until the mid-2000s that a tipping point was reached—this is according to a 2005 Association of College and Research Libraries survey of academic libraries, which found a nearly ten-fold increase in the number of digital collections reported since the previous year (Raab 2007). These days everyone's doing it, or so it seems, and for many institutions—the large public and research libraries, museums, and archives of the world—it almost seems as good as done. If you look at the websites of institutions like the Library of Congress, the British Museum, or a Big Ten university library, you may find thousands if not millions of digitized objects in nicely designed collections, complete with detailed descriptive records and likely a slew of “added value” features such as OCR (optical character recognition) for full-text searching; images that can be zoomed, panned, and cropped; social media integration; or interactive multimedia such as maps and time lines. These collections represent many years and man-hours of work,

usually involving specialists who are dedicated to their creation, and often entire departments of such specialists.

Often in the parlance of digital librarians and other technologists there is talk of “scaling,” referring to whether or not a process scales up to a larger level of magnitude. But in the case of digitization at smaller institutions, such as public and college libraries and local archives, museums, and historical societies, the better question may be whether the approach of larger institutions scales down. These are the places where digitization efforts may still be getting off the ground, and where librarians, archivists, and curators are seeking out the best ways to get started with digitizing their collections. They may be feeling pressure to “catch up” to larger organizations—indeed, according to a 2010 report by the Online Computer Library Center, one of the most challenging issues in special collections and archives was the “implicit mandate to put as much material as possible online, and as soon as possible” (Dooley and Luce 2010). If anything, this expectation has only grown stronger with time.

But can small and medium-sized institutions successfully follow the model of larger ones when it comes to digitization processes and workflows? In some ways the answer is yes, but in many ways it is no. While the basics may remain the same—scanning images, creating metadata, loading objects into a digital collections management system (DCMS)—the details of these activities, and the groundwork that must be laid in order to allow these activities to happen, may vary quite a bit between institutions of different sizes. This chapter looks at the ways in which digitization at smaller institutions is unique, and examines special considerations that may need to be taken into account by librarians, archivists, and curators when embarking on smaller-scale digitization projects. It also explores the advantages that smaller institutions may have when it comes to digitizing their collections.

Why Digitize?

But first things first—before we look too closely at the hows of smaller-scale digitization, let’s briefly discuss the whys. And what, exactly, do we mean when we say “digitization”? For our purposes, we will define digitization as the reformatting of physical or analog materials to create digital surrogates or facsimiles. This is done using technologies such as scanners and digital cam-

eras. There are many types of materials that libraries, museums, and archives might choose to digitize, among them photographs and other types of images, manuscripts, maps, printed music, recorded music and oral histories, videos, slides, microfilm, and three-dimensional objects.

There are various reasons an institution may decide to digitize its holdings. In the early years of digital collection building, the emphasis was almost exclusively on access: to put digital materials online so they can be found and used, in order to make the materials more broadly, quickly, and efficiently accessible (Levy 2000). Increased accessibility continues to be a very important objective, particularly for collections that may be “hidden” or obscured from the public in their physical form, for example uncataloged or noncirculating archival materials. Allowing ubiquitous access to collections via the Web allows them to be discovered and utilized by a much broader audience than only those users who are willing and able to visit an institution to view its unique local holdings in person.

Digitization should, first and foremost, meet an institution’s obligation to make its collections accessible. However, Stephen Chapman makes the important distinction that making collections Internet-accessible is not the same as making them user-accessible. “Before emulating the policies and practices of a peer institution, ask whether its programs have been configured to serve comparable audiences and audience needs” (Chapman 2004). It may not be appropriate for a rural public library, for example, to model its selection and digitization strategies after that of a large research university, since its patron base will likely be quite different. Accessibility encompasses not just making material available in digital form, but understanding the organization’s users and the uses they will make of the available information.

A second reason to digitize is for preservation purposes. Creating digital surrogates can serve to indirectly protect fragile or brittle physical materials by providing an alternative means of access, thereby minimizing handling and further damage to the original (that is, if demand for the original item does not increase due to heightened awareness caused by the availability of the digital surrogate, a possible side effect). Digitization for preservation, as this approach is known, is not to be confused with digital preservation, which can essentially be defined as preservation practices that are applied to digital materials that are either born digital or reformatted from analog media. Digital preservation is an important step in the process of digitization, and one

that will be discussed at length in chapter 9. It is important to note that digital surrogates should not be considered replacements for analog originals, which have intrinsic value and compared with which even the best-quality digital image represents a loss of information (Besser 2003).

Finally, there is the previously mentioned “added value” factor. Digitization can provide a means of enriching materials and collections with features that assist users in utilizing and understanding them in new and novel ways. This may be as straightforward as functionality that allows users to select digital objects across collections and save them into their own, personalized digital collections, or as sophisticated as text encoding that permits scholars to mine texts for new insights regarding their content and meaning. Data visualization is another way that digital materials can be brought to life, allowing users to better understand the context of a digital collection by placing the data in a visual context (think interactive graphs, charts, time lines, and maps). Digitization can create new ways for information to be displayed, analyzed, and understood that may be difficult or impossible in the original analog form.

Aside from these three basic goals, there are secondary objectives to be gained from digitization. As Terence K. Huwe points out, digital collections have the potential to create excitement among patrons, and the process of digitizing these collections can be a good way for institutions to attract funding, political support, and patron attention (Huwe 2013). Particularly for smaller organizations that serve the public sector, digitization of unique local holdings can be a smart public relations move and can further institutional goals to satisfy patron needs. This is to say nothing of patron expectations, of course. We live in an era when patrons may anticipate, and indeed demand, that information be made available to them in virtual form. This provides incentive for digitization projects, but it can also leave cultural heritage institutions stuck “somewhere in the middle . . . facing an audience which expects to step through a perfectly designed gateway into a virtual world where everything is available online” (Walsh 2013). This expectation can create particular challenges for small institutions that may already have significant hurdles to surmount when it comes to creating sustainable digitization programs.

Patrons are often surprised to learn that universal digitization has not been achieved for all or most library, archive, and museum content. After many years of hard work, even small institutions may have only a small percentage of their holdings converted to digital. It is important to remember that digitization is usually a slow and steady process that involves a good deal of

design and planning prior to execution. Projects often take longer than originally anticipated, and a good rule of thumb when planning for new digitization initiatives is to allow for a time frame twice as long as initially projected. This is particularly true for first-time projects; as experience is gained, so also is speed. It is also generally the case that smaller institutions may see slower progress, at least at first, for reasons outlined later in the chapter.

When asking “Why digitize?” it is important to keep in mind the specific mission of the institution. As David M. Levy emphasizes, more information is not always better and digital libraries cannot be all things to all people (Levy 2000). In the same vein as Chapman’s emphasis on user accessibility, an academic library serving students and researchers may have very different motives and aims than a public library or museum when it comes to selecting materials for digitization, and overarching institutional goals should be adhered to when planning which items to digitize. Factors to consider include which items are perceived to have the most demand from the patron population and which items best reflect the unique holdings of the specific institution.

Digitization at Smaller Institutions: How It’s Unique

In his article “College Librarians and the University-Library Syndrome,” Evan Ira Farber observed a “pattern of attitudes which cause college librarians . . . to think of their libraries in terms of university libraries and imitate practices, attitudes and objectives” of these larger organizations (Farber 1974). This tendency Farber dubbed “university-library syndrome,” and he stressed that differences between these two types of institutions should be kept in mind if college libraries are to achieve their goals. Access to electronic information has narrowed the gulf between college and university libraries considerably since Farber wrote his article, but the “syndrome” he describes may be alive and well in another form in the era of digitization. It is tempting for librarians, archivists, and curators to look to larger institutions as models when embarking on their first forays into digital collection building. However, there are differences that must be kept in mind if smaller institutions are to achieve their digitization goals.

At the same time, there is the growing expectation that smaller institutions will provide the same level of service as larger ones, and this provides a unique challenge. In the area of academia, “small academic libraries are challenged

to continue essential legacy services while ratcheting up new projects that will enable students and faculty to engage in twenty-first-century research and learning . . . Although resources for small college libraries pale in comparison to those at research university libraries, many of the same services are expected by faculty and students” (Doherty and Piper 2015). This is arguably the case for all types of cultural heritage institutions, where global online access to content has become the expectation of the public at large.

One commonality of smaller institutions is that they often have fewer resources when it comes to money, staff, and infrastructure. Successful digitization projects rely on all three of these elements, and a lack in any area can serve as a major hindrance to overall progress. Thus, smaller institutions often have to get creative when it comes to marshaling the resources necessary to digitize their collections. It is also the case that every individual digitization project is unique, and that resources will need to be allocated on a project-by-project basis. The three areas of money, staff, and infrastructure are discussed in more detail in the following sections.

MONEY

Money, or lack thereof, is a deciding factor in numerous aspects of digitization. Many small and midsized institutions must deal with less-than-adequate funding in multiple areas of operation, and this often carries over to digitization initiatives. Funding is perhaps the greatest challenge when it comes to these projects, as it affects every other aspect, including staffing and infrastructure. Money is needed to hire project staff, purchase scanning equipment, license necessary software, and arrange for short- and long-term digital file storage. Researching costs and determining that an adequate revenue stream is available prior to beginning a digitization project are essential first steps.

The good news is that digitization projects can be completed on a shoestring budget. In the lowest-cost scenario, an organization’s preexisting scanning technology can be repurposed for digital projects or a new flatbed scanner purchased for a reasonable cost; existing staff can be reassigned to digitization tasks; and free, open source software can be utilized to deliver digital objects and metadata to users. While this bare-bones approach is not always ideal, it is possible to create digital collections with a minimal outlay of monetary resources.

The bad news is that less money spent may lead to lower quality in the final product, and the bare-bones approach can sometimes create more problems than it solves. This will be illustrated in more depth in later chapters discussing DCMSs and digital preservation. But suffice it to say that many institutions choose to spend more than may seem strictly necessary because paying more, for example, for a commercial DCMS rather than a free option, can save time, headaches, and (yes) more money down the road. This is not an endorsement of one option over another, merely an acknowledgment that dealing with funding issues will inevitably lead to trade-offs that an institution will need to weigh carefully in the planning stages, and that will vary considerably due to individual institutional needs. A dispassionate and level-headed examination of necessary requirements versus desired features and functionalities, coupled with careful research into the available options, will set the stage for a project that makes successful use of available monetary resources.

One avenue that many smaller institutions pursue in order to address monetary shortfalls is to apply for grant funding. There are many funding opportunities available at the national, state, and local levels that can be used to seed a digitization project or program. The National Endowment for the Humanities, the Institute of Museum and Library Services, and the National Historical Publications and Records Commission are federal organizations that offer grant funding specifically for digitization initiatives. Private foundations that have an interest in the specific subject domain related to the materials you want to digitize may also be sources of funding (for example, you may be able to make a case to a national anthropological association for funding the digitization of a noted archaeologist's field notes). When looking for grant funding, it is usually advisable to focus on discrete, one-time purchases such as scanning equipment or servers. This is because many costs related to digital collections are ongoing, for example software licenses and staff salaries, and once a grant ends it may be a challenge to replace funds for these continuing costs with those from a homegrown source. Keep in mind, though, that hardware and equipment will also need to be replaced at some point in the future.

Unfortunately, grant funding for digitization may be more difficult to secure in the current climate than it once was. Marshall Breeding argues that digitizing collections is no longer an especially "noteworthy" activity, and that libraries seeking external funding for digitizing will have to work harder than

ever to present a convincing argument (Breeding 2014). For this reason, it is a wise goal to make digitization activities part of the regular organizational budget, rather than relying too heavily on outside sources of funding. However, grant monies can be invaluable for getting your digitization program off the ground.

A cost-saving path that a large number of smaller institutions follow is to join a local, regional, state, or national consortium. The ability to share costs across multiple institutions is a highly appealing prospect, and for some small institutions this cost-sharing may be the deciding factor that enables them to pursue any digitization program at all. There are many reasons why the consortium route is advantageous for small and medium-sized institutions, and these are looked at more closely in chapter 4, which examines cross-institutional collaboration.

STAFFING

Following funding, staffing is perhaps the second greatest digitization challenge for smaller organizations. In ideal circumstances, a cadre of full-time staff members would be assigned solely to digital projects, possibly forming a unit or department dedicated to digitization initiatives. There would be people whose positions would be devoted to tasks such as project management, metadata creation, collection development, software and hardware management, web design, and production work (creating digital objects and uploading them to a DCMS). These and other tasks combine to make digitization a complex and multifaceted process, requiring that disparate areas of expertise come together in order to ensure success.

This does not mean that if your institution lacks such a team of people, you are out of luck when it comes to starting a digitization program. The above is the best-case scenario, and one that may be necessary at large institutions in order to deal with the high volume of content being digitized (not to mention various levels of bureaucracy that may exist). However, the model of a dedicated digitization unit is often neither feasible nor practical for smaller institutions, for reasons linked to money and infrastructure. Small, stand-alone digitization projects may even suffer from this type of model, being bogged down by too many hands. Many small and medium-sized institutions have successfully started and maintained a digitization program with one or fewer

dedicated full-time staff members, but as with most other aspects of small-scale digitization, the task requires flexibility and creativity.

For the smaller institution, the best-case scenario for starting a digitization program involves hiring or repurposing a position for a digital librarian, someone who is tasked solely with planning and managing digital projects. Ideally, this person would strategize how to get the overall project off the ground, formulate effective workflows and procedures, and maintain these processes over time. He or she may conduct hands-on activities such as metadata creation or quality control, or merely serve as a project manager and facilitator for those who do. The digital librarian may not even be a full-time staff member, but he or she should be tasked solely with administering and overseeing digital projects (one staffing model that does not work as well is to add project management to the tasks of someone who is already working full-time in another area). It is important to have at least one person who is responsible for taking the lead in this manner, in order to ensure smooth and efficient project work. A more in-depth look at the work of the digital librarian, with a focus on those who work more-or-less “solo,” is the topic of chapter 2.

It may be tempting to believe that hiring a digital librarian will take care of all of the staffing needs of the smaller institution; however, this is not necessarily the case if one desires to see projects completed in a timely and efficient manner. At organizations of all sizes, digitization is a team effort and collaboration is key. Yet the large institution staffing model outlined above is often not realistic for the small or medium-sized institution. Where, then, does the manpower come from? In most cases, it is necessary to repurpose staff from other areas and reassign to them digitization duties (perhaps even reassigning someone to the role of digital librarian, who may then have to learn the job from scratch). This requires making digitization a priority at the institutional level, because coordination between units, departments, and people is vital. Information pertaining to existing staff roles and suggestions for how to best repurpose them for digitization activities can be found in chapter 3.

Reassigning staff duties reflects an overall need for a collaborative approach to digitization. This is true of programs at large institutions, where the aforementioned cadre of specialists would work together to shepherd a project through to completion. Again, this model may not be feasible for the library or archive with one or fewer digital experts. In these cases, it is usually required

that the digital librarian or designated project manager gather together a group of colleagues who have intersecting or adjacent areas of expertise in order to both advise on and execute projects. Collaboration at the interdepartmental and consortium levels is explored further in chapters 3 and 4.

INFRASTRUCTURE

Rounding out the triad of issues faced by small and medium-sized libraries is that of technical infrastructure, including things such as scanning equipment, software, and servers. Obviously, these items can be expensive to purchase and maintain, which is where the challenge lies for smaller institutions with limited budgets. As is the case with funding and staffing, a little creativity and flexibility can go a long way toward solving the problems that may be confronted in this area. And luckily, the costs of storage and equipment have dropped dramatically over the past decade or so.

At the most basic level, any institution launching a digitization program will need to invest in one or more scanners—at least, any organization wishing to digitize still images, which are often the easiest starting point and are therefore the focus of the digital conversion chapter in this book (chapter 5). It may be possible to avoid such a purchase on stand-alone digitization projects, where it may be an option to outsource or share equipment with another institution. However, if an institution intends to create multiple digital collections over a prolonged period of time, it is worth the investment to purchase equipment for in-house scanning.

Depending on the level of output anticipated and the number of staff members available to work on scanning, multiple machines will likely be needed. For a very small operation, one scanner may be enough, at least for the short term. It may be a good idea to start small, for example by purchasing one image scanner that is dedicated to digital projects, and experimenting with it to determine the rate of speed at which you or your staff are able to produce digital files. Don't be surprised if it is a slower process than you had expected, and you determine that additional scanners are required to maximize efficiency.

Grant funding may be a good option for minimizing the expense of scanning equipment, since as mentioned before, granting agencies will more readily provide funding for one-time purchases such as hardware than for ongoing costs such as software or staffing. For example, Library Services and Technology Act funds administered through your state library can often be used for

digitization equipment purchases. If you belong to a consortium or are participating in some other type of collaborative project, it may also be possible to share equipment with a neighboring institution. This solution, however, is only advisable for discrete, one-off projects and not for long-term, sustained digitization programs. In the case of the latter, the efficiency provided by dedicated on-site machines is usually worth the trade-off in cost.

Other important aspects of infrastructure that are crucial for digital collection building include the underlying web servers and networks used to store and deliver digital content. A detailed examination of technical architecture for digital collections is beyond the scope of this book, and for our purposes it is necessary only to understand the basics. When planning your digital collections program, it is important to involve information technology (IT) professionals at your organization who have a good understanding of server and local network management and the capabilities of your institution's technical infrastructure.

Large institutions usually have the benefit of dedicated IT departments where local servers and software may be housed and managed by full-time technologists, thus providing an on-site location for file storage and delivery of content on the Web. If you have the resources to support it, you may decide to store and deliver your digital collections in-house from a local server. The basic infrastructure requirements of this model are extensible server hardware that can expand with the need for greater processing, memory, and hard disk storage; software that supports open standards; and a fast network connection (Tennant 1998). This may be the best solution for institutions that have access to a robust existing technology infrastructure and dedicated technical staff to manage it.

In recent years, another model has emerged which offers a good alternative to the local computing model outlined above: cloud computing. Cloud computing provides access to software applications, digital storage, and other technical resources through services that can be accessed via the Web, meaning that users do not need to purchase and maintain their own network resources. The official National Institute of Standards and Technology definition states:

Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing

resources (e.g., networks, servers, storage, applications and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction. (NIST 2011)

Cloud computing can ease the burden on smaller institutions that may lack the resources to effectively operate servers and network components that require a high level of technical expertise, allowing them to step away from the intricacies of hardware and software management that larger institutions may be better equipped to handle. Cloud computing can also be a more cost-effective option, as cloud providers benefit from economies of scale that they can then pass on to their customers. Running digital infrastructure on the cloud may make sense for institutions that are starting their digitization programs from scratch and do not have the monetary and staffing resources to invest in an in-house data center. Denis Galvin and Mang Sun recommend that projects using software like Omeka (a free, open source web publishing platform that is often used to collect, preserve, and present small-scale digital collections) are good candidates for the cloud (Galvin and Sun 2012)

Galvin and Sun also point out that all of the same rules that apply to physical hardware apply to a cloud server (ibid. 2012). This reminds us that, as with all technology, there are drawbacks to cloud-based services. For example, if there is a major problem in a cloud data center, then you may be one client among thousands and may not be first in line. Having specialists in-house to deal with major problems costs money up front, but it may end up saving more in the long-term (Carson, Botter, and Krujelskis 2013). Furthermore, running your own programs and applications on the cloud does not negate the need for local technical expertise. It may be feasible to have your own instance of a free, open source DCMS running on a cloud server, but IT personnel or library technologists will still be required to install and manage the software and keep the repository up and running.

In the event that you lack the technical infrastructure to host digital collections either locally or in the cloud, a third option is to contract with a vendor that will provide data storage and a DCMS, all hosted remotely on its servers, along with technical support. Commercial DCMS such as CONTENTdm and bepress operate this way, and there are also third-party service providers that will operate open source repository software such as Omeka or Islandora using this model (these platforms are explored in more detail in chapter 7). Soft-

ware hosting is generally a very good option for small institutions, particularly when it is offered to members of a consortium or other group. It allows those creating digital collections to focus their efforts on tasks like content selection, metadata creation, and file reformatting instead of setting up, managing, and maintaining hardware and software. There are, of course, drawbacks to using hosted repository solutions as well, and these are discussed in chapter 7.

Advantages of Smaller Institutions

As the previous sections illustrate, there are multiple ways that smaller institutions may be at a disadvantage when it comes to getting digital projects done. The greatest concern for small libraries usually lies in having very limited resources. However, there are some ways that smaller size can be beneficial. When getting started with digitization projects, it's important not to let your organization's perceived deficits overshadow its strengths.

Smaller organizations may have an advantage when it comes to digital collection building because they often have large amounts of unique local content, for example local history collections at public libraries or historical societies. This is the type of material that lends itself particularly well to digitization because it may be highly used in its physical form and will benefit from both increased accessibility and digitization as a preservation measure. Smaller institutions may also have greater local connections that can be tapped into for completing digitization projects. These may include the general public, volunteers, and Friends groups. The knowledge of those who are familiar with local history, people, and events can be invaluable when performing tasks such as metadata creation. Crowdsourcing, the process of getting work or funding from a crowd of people who are online, is one way that local communities have contributed to digitization projects. These projects have generally involved enlisting "the crowd" for assistance in identifying and describing the contents of digitized images and other resources. (However, it's important to remember that volunteers aren't catalogers; trained staff should be utilized as intermediaries to ensure that metadata is accurate and conforms to accepted standards.)

Farber identifies several ways that smaller institutions may have a leg up in general over larger ones in terms of efficiency and innovation. They may have

relative clarity of institutional goals, a more manageable size, less bureaucracy, and more independence (Farber 2000). Doherty and Piper echo these sentiments and contend that, at least when it comes to academic libraries, smaller institutions can be “more agile and quick to adopt new technologies and workflows with compact communication networks, legacy flexibility in job functions, and fewer layers of bureaucracy and cultural differences with which to contend” (Doherty and Piper 2015). All of these advantages can carry over into the realm of digitization and allow for increased productivity and creativity.

Karen Calhoun identifies four key challenges facing digital libraries, one of which is community engagement, asserting that deep engagement with the communities that digital libraries have been meant to serve is uneven (Calhoun 2014). Why do some digital libraries have a distinctive impact on their communities, while others are more or less ignored? Similarly, Hamilton defines a sustainable digital library as one that is considered essential by the community it serves (Hamilton 2004). An advantage of the smaller library, archive, or museum is that it may be better placed to meet the challenges of community engagement and social sustainability through deep and long-standing connections with the local population. A smaller institution can provide access to content that is highly valued by the community it serves by capitalizing on its unique local holdings. It is these previously hidden or inaccessible collections that often attract the most users, who may feel that they have a personal stake in the preservation and curation of these particular cultural assets, assets that have few or no substitutes elsewhere.

Finally, R. David Lankes asserts that “the mission of librarians is to improve society through facilitating knowledge creation in their communities” (Lankes 2011). This concept of “participatory librarianship” is well served by the smaller library or other knowledge institution that makes its digitized holdings available to the public. Through crowdsourcing or merely by enabling access to these materials, institutions can leverage their strong local connections and give users the ability to reuse and repurpose content that is especially meaningful to them. The types of collections held by smaller institutions, particularly those related to local history, tend to lend themselves well to this type of endeavor.

Final Thoughts

Digitization as a whole is an activity that involves many moving parts, and these will be discussed at length in later chapters. This complexity can pose many challenges, and for smaller institutions these challenges may be amplified by limited knowledge and resources. If you are at a small or medium-sized institution and are just getting started with your digitization program, you'll want to carefully examine your available resources and strategize how best to organize them in order to maximize their potential. You may not have very much wiggle room when it comes to money, staff, and infrastructure, and you will most likely be required to muster a good deal of creativity, flexibility, and resourcefulness.

But just because digitization can present special issues for small institutions, this doesn't mean that it isn't worth pursuing. The benefits to the institution and its patrons will generally far outweigh any difficulties that may arise during planning and execution, and once the initial hurdles are overcome, your digitization program can proceed as smoothly and efficiently as any other core service. As with any new endeavor, initial investments in research and planning will pay dividends down the road. At the same time, don't be afraid to make mistakes, since very little in the world of digitization is irreversible. Strive to meet the standards, best practices, and guidelines that are outlined in this book, but recognize too that perfection is not the ultimate goal. Digitization at smaller institutions requires finding a balance that works for you and your users.

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f denotes figures; *t* denotes tables. Boldface indicates a glossary definition.

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