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Introduction and Survey Background

In August 2014, LYRASIS consultant Tom Clareson and staff from the Rhode Island Historical Society conducted an online and telephone survey of libraries, archives, historical societies, and museums in Rhode Island as part of the HELIN Consortium Digital Portal Planning project.

The HELIN Consortium of Rhode Island secured a Library of Rhode Island (LORI) grant to develop plans for a statewide digital portal which will provide online access to the digital collections of Rhode Island. The service will feature cultural heritage resources at first, and then is planned to grow to include materials from business/economic development, government, and education. Planning for the repository platform, discoverability tools, and support services is underway, including a series of planning meetings, focus groups, and this survey effort.

Prior to the survey calls, Rhode Island Historical Society staff identified approximately 50 cultural heritage institutions, and the staff of the Rhode Island Office of Library and Information Services identified 27 libraries as priority candidates which might have already digitized material or had materials which could be digitized from the over 464 total cultural heritage institutions which had been identified from throughout the state.

A total of 32 institutions participated in the survey. Twenty-five institutions were libraries (16 of those were Public Libraries), five were historical societies, two were archives, and one respondent was a museum. A majority of those completing the surveys at the responding institutions were administrators (13 or 41%), ten or 31% were librarians, four or 12% were archivists, four (12%) were digital librarians, 2 (6%) were information technologists, and 2 (6%) were collections managers/curatorial staff.

Digital Collections

Twenty-seven of the institutions (84%) said they had digital collections. Approximately half (14 or 44% responding to the question) created these collections through scanning/digitization; one collected and acquired their digital collection; and eleven (34%) did a hybrid of the two activities. All but one institution that was not currently digitizing said they would begin in the next three years.

The responding organizations listed the sizes of their digital collections, and these broke down into four general groups. Eight institutions had collections between 100-250 items; one between 500-1000; four between 2000-3000; and five between 5000-15,000 items. Two institutions reported collections of 20,000-95,000 items. The acquired collections that were enumerated were between 1500-2000 items.

Many of the organizations responding to the survey (8 or 25%) began creating their digital collections between 2011-2014. Eight others began between 2006-2010, and six started between 2001-2005. There were three organizations that began earlier, two between 1991-2000, and the other prior to 1990. Trends were similar for those collecting or acquiring digital collections. Five (16%) began between 2011-14, five between 2006-10, one between 2001-2005, and three between 1991-2000.
Digitization Policies

A series of questions addressed the digitization policies which institutions have put in place. In each area, fewer institutions had written policy documents than did not. Organizations had digitization included in their policies for:

- Mission and Goals (10 yes, 20 no)
- Preservation (9 yes, 21 no)
- Strategic Planning (8 yes, 22 no)
- Emergency Preparedness (8 yes, 22 no)
- Collection Development (7 yes, 21 no)
- Rights and Licensing (7 yes, 24 no)
- Exhibition (3 yes, 26 no)

Digital Collections: Administration and Management

A majority of the responding institutions (10 or 31%) had no money in their current operating budget for a digital collection initiative including staffing and technology. Three organizations reported annual budgets for digitization ranging from $100,001-250,000. Two institutions each reported budgets of:

- $1,000-2,500
- $2,501-5,000
- $5,001-10,000
- $10,001-25,000
- $50,001-100,000

Additionally, two organizations did not know the current amount of their budget for their digital collection initiative, and one noted that the budget was distributed among existing staff and budgets.

Organizations could report multiple sources of funding for their digital collection initiatives. Most (14 or 44%) have funding from their organization’s operating budget. Six (19%) reported funding from grants. Five (16%) did not report a budget source, and two received fees from fundraising.

Digital Collections: Selection and Acquisition

Organizations were asked why they create or collect/acquire digital collections. Top reasons included:

- To provide online access to materials: 28 or 88%
- To increase access to the collection: 27 or 84%
- For study and use by local users: 25 or 78%
- For study and use by remote users: 22 or 69%
• To preserve the original by reducing handling: 19 or 59%
• For marketing and promotion of the institution: 14 or 44%
• For identification purposes (collections management, cataloging, etc.): 13 or 41%
• To contribute to a collaboration/consortium: 11 or 34%

In addition to probing the reasons why organizations were digitizing, the survey also looked at how the institutions choose what to digitize. The most important selection criteria included:
• There is a strong local interest in our materials and/or collection: 27 or 84%
• Materials are fragile or deteriorating: 24 or 75%
• They are of high value and digitizing will increase access: 18 or 56%
• The materials are heavily used: 16 or 50%
• They correspond to an upcoming exhibit or collaboration with another organization: 13 or 41%
• There is a grant available to digitize material in the collection: 11 or 34%
• Donor requested that the collection be digitized: 10 or 31%

A vast majority of the surveyed institutions (26 or 81%) create digital collections from physical source materials. The most popular material types digital collections have been created from include:
• Flat works on paper: 21 or 66%
• Photographic prints: 20 or 63%
• Maps, architectural drawings, posters: 18 or 56%
• Text manuscripts or other multi-page items: 16 or 50%
• Manuscripts (letters): 14 or 44%
• Books: 12 or 38%
• Film (film negative or glass plate negatives): 12 or 38%

The survey also asked if institutions were creating or acquiring born digital collections. Fifteen (47%) are, and 9 each (28%) responded no, or don’t know. The born-digital collection types most often created were photography and other still images (9 respondents), documents such as PRFs, word documents, spreadsheets, etc. with 8 respondents, digital audio (8), and digital video (6). The formats most often “brought into” or acquired by responding institutions were digital audio (7), digital video (6), and documents (6).

Some Rhode Island institutions that are creating digital content are using national standards and best practices while others are not. Nine organizations (28%) did not know if they were using standards or best practices; eight (25%) were using vendor-recommended standards; six (19%) were using FADGI (the Federal Agencies Digitization Guidelines Initiative Standards); and five (16%) were utilizing the National Archives and Records Administration (NARA) Technical Guidelines for Digitizing Archival Materials for Electronic Access: Creation of Production Master Files – Raster Images.

Respondents could select many formats or file types for the materials they created. The top digital file types created were TIFF (21 or 66%), JPEG (19 or 59%), PDF/PDF-A (17 or 53%), and WAV (9 or 28%).
**Rhode Island Collections**

To gain an idea of the scope of resources which could be made available to Rhode Island residents, the survey collected two types of information about Rhode Island-related collections held by cultural institutions in the state. First, the survey asked about topics for which institutions had materials that had already been digitized, or are in digital format. There were several topics where digital materials existed in a variety of formats. These included:

- Rhode Island History (14 or 44%)
- Local History (9 or 28%)
- Art and Architecture (7 or 22%)
- Politics and Government (6 or 19%)
- Water Resources (6 or 19%)
- Environment/Ecosystems (5 or 16%)
- Transportation (5 or 16%)

In addition, there were four subject areas in which many organizations held digitized photographic collections:

- Rhode Island History (7 or 22%)
- Local History (7 or 22%)
- Beaches (6 or 19%)
- Art and Architecture (6 or 19%)

The next question asked about collection topics held which could be digitized in the future. The leading topics were:

- Rhode Island History (18 or 56%)
- Local History (18 or 56%)
- Politics and Government (11 or 34%)
- Transportation (8 or 25%)
- Environment/Ecosystems (7 or 22%)
- Art and Architecture (7 or 22%)
- Water Resources (7 or 22%)
- Fishing (7 or 22%)
- Boating (6 or 19%)
- Natural Resources (6 or 19%)

**Access and Technology**

Organizations were asked, in an open-ended question, if they draw from their digitized collections to create online/virtual galleries. Fourteen of the 30 institutions answering the question do not create online galleries. Those who do are currently using Bepress, Omeka, or their own institutional website to mount the galleries.
Organizations that are tracking the use of digital materials on their website mainly used Google Analytics, mentioned by eight organizations. Intended audiences for the digital collections which were most often mentioned are the general public and researchers. However, most of the organizations do not make special efforts to promote their digital collections.

Twenty (63%) of the institutions do not have a digital asset management system. The most used systems were Omeka (5 or 16%) and Digital Commons (4 or 13%). The organizations provide public access to their digital collections through a website associated with their institutions (22 or 69%), or through social media (YouTube, Flickr, Pinterest).

Digital items require metadata for discovery, access, management, and preservation. Institutions responding to the survey said they most often created descriptive metadata (23 institutions or 72% created information that allows for the discovery of the resource such as title and subject) and 12 or 38% create administrative metadata (dealing with rights, ownership of material, and access privileges). Eleven institutions each create technical metadata (information describing the production process or digital attributes of the work) and structural metadata (for purposes of linking different parts or units of data. Seven organizations (22%) do not prepare any metadata, and only two are creating preservation metadata for the purpose of assuring long term access to the digital resource. A positive finding was that twelve institutions (38%) said they have metadata for 76-100% if their digital items; however, five (17%) had it for only 26-50% of their digital collections; six (19%) did not know, and four (9%) had none. When asked how many metadata records have been created for their institution’s digital collections, two organizations said no records, two did not know, four said 1-200 metadata records, four indicated 2000-5000, and five had over 10,000 metadata records.

Respondents were asked what cataloging standards and controlled vocabularies are used in preparing descriptive metadata. Answers indicated the use of a wide variety of standards:

- Library of Congress Subject Headings (LCSH): 13 or 41%
- Local rules: 7 or 22%
- Anglo-American Cataloging Rules 2 (AACR2): 6 or 19%
- Resource Description and Access (RDA): 6 or 19%
- Describing Archives: A Content Standard (DACS): 7 or 22%
- Art and Architecture Thesaurus (AAT): 6 or 19%
- None: 5 or 16%
- Don’t Know: 4 or 13%

Few of the organizations surveyed support metadata harvesting, in fact ten (31%) said they do not support any metadata harvesting capability, and eleven (34%) did not know. The standard most often supported (5 institutions or 16%) was Open Archival Information Protocol for Metadata Harvesting (OAI-PMH).

Ten respondents (31%) have I.T. departments at their organizations; eight (25%) did not, and six (21%) outsource I.T. to an external organization or vendor. The I.T. services for digital collections which most institutions supported were digital imaging (17 or 53%) and web development/design (14 or 44%).
Digital Rights Information

Responding institutions were asked if they agreed or disagreed with some statements on rights issues for digital collections. Most strongly agreed that they “consider copyright and/or intellectual property concerns in managing digital collections” and that they “feel confident in making copyright licensing and digital copyright decisions about their digital collections. Copyright and licensing issues were a deterrent for ten (31%) of the institutions in creating and preserving digital collections, and institutions were split between eleven that strongly agree and eight that strongly disagree that they acquire digital preservation rights when they acquire collections. Also, most organizations (12 or 38%) do not record and maintain rights metadata to limit delivery of collections to authenticated users. In a final rights-related question, 18 (56%) have not, seven (22%) have, and five (16%) did not know if they had updated their deed of gift agreement/donor agreement to include digital collections.

Collaboration on Digital Activities

Nineteen organizations (59%) collaborate with other cultural heritage institutions on their digital initiatives, and thirteen (41%) do not. The digital collaboratives most participated in currently are HELIN (4 responses), RHODI (2), the Internet Archive (2), the Rhode Island State Archives (2), Ocean State Libraries (2), and Newport (2).

There were a wide variety of collaborative digital activities organizations participated in, including:
- Promotion of shared digital collections (10 or 31%)
- Using a common set of standards and best practices for digital content creation (10 or 31%)
- Using a common set of standards and best practices for metadata (9 or 28%)
- Submitting collaborative grant proposals (6 or 19%)
- Shared institutional repositories (5 or 16%)
- Creating exhibits from shared digital collections (5 or 16%)
- None (7 or 22%)

When asked to rank the importance of collaborative digitization project goals from 1-5, where 1 means least important and 5 means most important, a majority of the responding institutions considered all of the potential goals as highly important:
- Providing implementation assistance, ongoing training, and consulting on digitization
- Identifying and sharing standards and best practices for the digitization of different types of materials
- Identifying and sharing standards and best practices for improving access to digital collections
- Sharing collection resources among members of a collaborative and providing end user access to collections
- Developing the capacity and resources to digitize materials
• Increasing visibility and expanding the audience for their digital collections and organization
• Sharing technical resources
• Expanding personal and organizational networking capabilities
• Sharing the cost of developing digital infrastructure and collections
• Participating in a grant that supports collaborative initiatives

Training
A vast majority (29 or 91%) of respondents indicated that they, their institution’s staff, and/or institutional volunteers would be interested in receiving professional development training related to digitization; only four organizations (13%) indicated no interest. Training topics of most interest were how to organize and store digitized collections (27 or 84%), how to promote digitized collections (17 or 53%), how to select items/objects for digitization (11 or 34%); seven respondents suggested other topics, and the most popular of those was content creation/scanning.

RHODI Questions
As part of the survey project, the Rhode Island Historical Society RHODI project requested inclusion of questions that were generally targeted toward their historical society and museum constituents.

Organizations were asked if they had a mailing list; 20 (63%) did not and 11 (34%) did. Total numbers of addresses on the mailing lists ranged from three organizations with 160 contacts or less to one with 500 and three in the range of 1600-3000.

A number of questions dealt with reproductions of collection materials. Eleven organizations (38%) sell digital reproductions, while 19 (59%) do not. Materials which are reproduced include printed images (9 organizations), digital images (8), video (4), and audio materials (3).

The largest group of buyers for these reproductions is “mostly scholars and researchers,” with seven respondents. Digital reproductions are most often purchased by contacting the organization directly (via phone, e-mail, etc.), with nine respondents using this method. Response time for the purchases ranged between one day at two institutions to two weeks or more at four organizations. Most organizations have agreements or forms which are processed to complete the order. Cost for the images ranged from $10 for images used for personal, non-profit, or educational purposes, to $30 or more for commercial use. Very few organizations reported their annual revenue from digital products or the approximate return on investment from the sale of digital reproductions.

While few institutions specifically named the digital images most often requested from their collections, thematic categories sold most by the organizations included theses and dissertations, whaling collection materials, Rhode Island collection materials, street scenes,
 Comments

Survey participants had two opportunities to provide comments, dealing with assistance Rhode Island cultural institutions might need to expand access to collections on the State’s heritage (both those collections that are currently in digital form as well as those collections that could be digitized in the future), and comments or needs regarding their institution’s digital projects and activities. Some of the responses provided excellent insight on needs to move a statewide digital portal project forward.

- DPLA is a good opportunity. Also, many organizations have a small staff or are volunteer-run, so getting imaging/scanning/content creation done will be important.
- Centralized out-sourcing of materials to be digitized (is needed to expand access to statewide collections)
- What would be the ongoing funding source for a statewide digital collaborative? Most organizations don’t have the resources or staff to sustain this – a question of sustainability. Also need technical support for the statewide digital repository.
- The HELIN initiative is great, but thus far has not been particularly inclusive of non-academic libraries. I would like to see a statewide digital initiative that is similar in scope and support to the Digital Commonwealth of Massachusetts. One major area of concern regarding that endeavor is in supporting organizations that may not have the financial or staff capability in digitization. In many ways, the smaller collections at local historical societies and public libraries may benefit most from digitization as their collections are likely less accessible.
- Best practices are too much for us. If we waited until everything was perfect it would never get done. Instead we do the best we can and as a result we end up with a pretty good project. About 4 years ago when our on-line collection was brand new the furniture database people at Yale said it was the "best" database they had worked with. Best practices need to be scaled back and scaled down to work in small institutions.
- Individual institution comments:
  - The Library is interested in digitization although they do not have anything digitized as of this time. In addition to some Local history materials in the collections, such as yearbooks and newspapers, which could be digitized, the Library houses a historical society in the building with print and artifactual material that could be digitized, which is currently run by volunteers. Digitization could be a meaningful volunteer opportunity for community members that are retired.
  - We currently do not have a cohesive vision for digital collections. There are smaller collections which have been digitized for promotion rather than access or preservation, and those have lower metadata standards and reside in various hosting sites. We are currently working with Digital Ark on a pilot project to build a digital repository and would like to ultimately move all digital assets into...
one single, searchable repository. However, this will be a long-term ongoing project as funds are available.

- Having robust and accessible digital collections is really important to me ... but I am at an impasse. Limited budget and capacity, as well as University regulations about using things like Flickr, have kept me from moving forward with any digital projects. (This comment also noted concerns about digital storage).

**Conclusion and Recommendations**

The overall response rate for the HELIN Project Survey was quite low, especially in the historical society and museum sector. Rhode Island Historical Society staff noted that this might be due to small staff sizes at many of the institutions, volunteer staff, or a lack of digital activity at the institutions. A positive finding for future statewide digital activity was that 86% of the responding institutions have digital collections and all but one of the organizations not currently digitizing said they would begin in the next three years. Much of the digital activity at the surveyed organizations had begun in the past four years, and most reported small collection sizes (between 100-250 items), showing room for growth in institutional and collaborative digitization programs.

While over one-third of the organizations included digitization in the mission and goals, in almost all other digital policy areas, 75% or more of the institutions did not have other important policies related to digitization, including emergency/disaster plans, digital collection development plans, and other key policies and procedures. Assisting in this type of policy development for Rhode Island institutions is an important future step for the HELIN collaborative effort.

There were some large annual budgets for digitization at responding institutions (three respondents reporting annual budgets between $100,001-250,000), but most organizations had no money in their current operating budget for a digital collection initiative (including funding for staff and technology for digitization).

Almost all the institutions surveyed create digital collections from physical source materials, and nearly half are creating or acquiring born digital collections. National standards and best practices for digitization are being observed at almost half of the institutions, but seven were using vendor-recommended standards (which may or may not reflect current best practices, depending on the vendor) and eight did not know if they were utilizing recognized standards and best practices.

Popular topics which had been digitized by responding institutions included Rhode Island History, Local History, Art & Architecture, Politics and Government, Water Resources, Environment and Ecosystems, and Transportation. These were also high among the collections subjects which could be digitized.

An area of concern was that two-thirds of the organizations do not have a digital asset management system, which allows for the sharing of digital collections and information. Also, while over two-thirds of the collections create descriptive metadata, the numbers were much lower for institutions creating administrative, technical, and structural metadata. An additional area of concern was that very few institutions support metadata harvesting.
Nearly 60% of the surveyed organizations are currently collaborating with other cultural heritage institutions on their digital initiatives. Additionally, almost all of the organizations taking part in the survey were highly supportive of collaboration on digitization in the future. And, there was a strong interest in receiving training on digitization issues.

Key recommendations and suggestions gleaned from the survey project which can help move statewide digitization and digital portal efforts forward in Rhode Island include:

- Further research and program development in the state to create a larger group of organizations that are digitizing collections. At the end of the telephone survey process, the consultant learned of a 2013 Ocean State Libraries consortium survey and tried to obtain a copy of the survey report, but he has not been able to get this information yet.
- Greater adoption of digital asset management systems within the state, or collaboration between those with and without DAMS so that those without the systems have an opportunity to provide wider access to their materials.
- Creation and adoption of policies dealing with digitization issues, especially in digital collection development, digital emergency plans, and digital preservation planning.
- An increase in the budgets for digital activities at many institutions throughout the state. While this may be difficult for institutions relying on their own operating budgets, potentially some grants to institutions and to the statewide collaborative could help to provide more funding for digital content creation.
- The number of institutions creating descriptive metadata was relatively high. However, further education and awareness-raising on the need for and benefit of technical, administrative, and structural metadata is needed.
- Perhaps the most important concern raised by the survey, which could strongly impact the creation of a statewide portal and contribution of metadata to the Digital Public Library of America, is the lack of support for metadata harvesting.
- There were a number of positive findings of the survey which point toward future growth in Rhode Island’s statewide digital initiative:
  - Many organizations are already collaborating on digitization efforts, and a majority of institutions are extremely supportive of some of the key goals and tenets of collaborative digitization. This “culture of collaboration” is much stronger than in many other states the consultants have studied.
  - There is a strong interest by institutions throughout the state in training on topics related to digitization
  - There was a great deal of support for some specific topics which have been, or could be digitized. Focusing future collaborative digital content creation on popular topics such as Rhode Island History, Local History, Art & Architecture, Politics and Government, Environment and Ecosystems, Water Resources, and Transportation will build current collections, and contribute to the digital corpus in the state in areas where institutions want to concentrate in the future.