Kentucky Digital Library Workgroup
Final Report
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I. Background and Current State of the KDL

The mission of the Kentuckiana Digital Library, the predecessor of the Kentucky Digital library, was as follows: the Kentuckiana Digital Library was built to enhance scholarship, research, and lifelong learning through the establishment of access to shared digital archival collections in the state of Kentucky. It also provides guidance and instruction for Kentucky libraries, archives, historical societies and museums on applying appropriate technologies used in the production of digital library resources.

KYVL selected the University of Kentucky (UK) to manage the ongoing technological infrastructure for the Kentuckiana Digital Library. In this role, UK managed the systems infrastructure for the digital library and created and performed digital conversion of selected archival material from around the commonwealth. Collections and subsets of collections selected for inclusion related directly to Kentucky history and culture and had a broad appeal on geographic, content and study levels. The materials were otherwise not widely available and oftentimes unique Kentucky archivists proposed collections at the repositories based on their evaluation of the materials' appeal and appropriateness.

The KDL currently includes 1,296,777 items from 26 Kentucky repositories. Formats include books, newspapers, images, archival material, journals, minutes, yearbooks, course catalogs, theses, athletic publications, directories, maps, ledgers, architectural drawings, oral histories, and audio. The Google Analytics site use averages from 2013-2015 show that the KDL site gets 34,295 session per month and 270,824 page views per month.

Since July 1, 2014, UK Libraries has been in a maintenance mode with KDL since no funding has been allocated by KYVL or CPE. UK Libraries has been providing access to the digital content from all of the contributing institutions but no updates were being made to the site and no collections could be uploaded since there was no funding to support these initiatives. University of Kentucky staff continues to assist in passing research queries on to the appropriate repositories. In summer 2017, the server hosting the Kentucky Digital Library will be taken out of service and it is unsure that the KDL will continue to be available. If it is maintained, the cost of doing so will be shouldered by the University of Kentucky.
KDL was named to Family Tree Magazine’s list of Best State Websites for Genealogy for 2015 - the only site to be thus named for Kentucky.

II. Who Uses KDL?
To put it simply, KDL is for everyone.

*Educators*
Educators can use it for teaching historical research to their students. In the future the workgroup recommends including K-12 educators in the development of the final product in order to make it more useful, possibly including timelines and collections aimed specifically at students.

*Students*
In addition to teachers students K-12 and higher education students are using the KDL for researching assignments.

*Libraries*
The KDL wouldn’t exist without contributions from libraries, but it can also provide many benefits. The KDL can host host, provide metadata and other technical assistance as well as share the data with DPLA. The DPLA requires information be submitted via the regional hub and individual libraries are not able to submit without the KDL.

*Researchers & Genealogists*
The KDL saves researchers and genealogists time. Having information from across Kentucky is a valuable resource. Adding additional libraries would be extremely beneficial to all researchers. There is a great deal of unpublicized information housed across the state that the KDL could efficiently gather and make available.

III. Primary Functionality Recommendations

*Collection Discovery*

The primary function of KDL is to facilitate the discovery of archives collections from across the commonwealth through a central online portal. Online users expect a one-stop Google-like search capability, which KDL should strive to provide for Kentucky’s archival resources. Without a central statewide portal, information remains siloed at its respective Kentucky institutions, which impedes user discovery of relevant related information held at multiple archives sites. Moreover, a centralized portal helps support and highlight the rich historical collections of Kentucky’s smaller cultural
heritage institutions, whose lack of name recognition or technical resources often result in those collections being ostensibly hidden from the larger online public.

**Digital Content Access**

Closely related to the collection discovery function of KDL is digital content access. As more users discover archives collections online, they increasingly expect to find online accessible versions of the documents, images, sound recordings, and videos from those collections. Digital content access allows the larger online public to engage with Kentucky’s archival collections at their convenience and is vital to providing information access to those who may not otherwise have the ability to visit the commonwealth’s cultural heritage institutions in-person.

Providing digital content access presents particular challenges, though, as institutions use a variety of systems to store and present their digital content. Furthermore, the standards and approach to describing that content varies from institution to institution. Given the heavy resource demand inherent to managing digital content, many smaller institutions must rely on efforts like KDL to administer their online collection materials. In some cases, smaller institutions rely solely on KDL to make their collections accessible online. As such, KDL must not only have the ability to display or link to digital content at partner institutions, but provide access solutions to institutions that do not have local support for digital content hosting.

**Storage and Preservation**

Digital storage and preservation is inherently resource-intensive, a fact exacerbated by the need to be sustained indefinitely. Luckily, KDL benefits from ever-decreasing digital storage costs and increasing choices for that storage. While perhaps ideally one Kentucky institution could host KDL storage, the options are no longer limited to local hosting. There are several options for cloud storage, which is becoming more affordable, and there exist free hosting solutions such as Internet Archive. There is an argument to be made that a hybrid approach may even be preferable in order to distribute material and better protect against data loss, especially for institutions with minimal digital preservation policies in place.
**Metadata**

In order to facilitate online collection discovery, KDL must be capable of easily and efficiently harvesting information content from partner institutions, including finding aids and digital content metadata. Information supplied to KDL from its partner institutions should be structured and standardized in such a way as to allow for effective search engine indexing and harvesting by other collection discovery portals, such as the Digital Public Library of America (DPLA) or the Digital Library of Appalachia (DLA). In much the same way as KDL should work to break down Kentucky’s statewide institutional information siloes, it should also work to ensure those information resources are discoverable to regional, national, and international audience beyond the commonwealth’s borders.

Furthermore, textual materials will require quality optical character recognition (OCR) and, where possible, transcripts of audio and video content should be made available as well, so that users do not have to rely on descriptive metadata alone to find relevant information.

**Administration and Assessment**

In order for KDL to remain a viable, flexible platform for collection access, it is imperative that it be administered according to centralized standards while simultaneously allowing for local control of content. Setting community-wide standards for metadata and allowable formats ensures consistent search behaviors and user experience, which allows for greater discoverability and ease-of-use. It also allows KDL to extend its partnerships with other digital libraries, such as DPLA, by providing easily harvestable metadata. With community-wide standards in place, local administration of content in accordance to these standards should allow partner institutions to add, edit, or delete content as they see fit, without having to rely on a central authority to make small content changes.

In order to report, assess, and respond to user and partner needs, KDL will require robust statistics gathering and regular usability testing. The speed of technological change invariably results in ever-shifting user needs and expectations, and so it is important that KDL utilize statistical data (such as
through Google Analytics) and testing to make data-driven decisions in service of continuous improvement of the platform’s functionality. Furthermore, as public institutions face steeper funding cuts, this assessment will allow KDL to quantify its worth to the state good and for partner institutions to make the case for continued membership.

**Curated Content**

KDL’s digital content must be easily accessible and useable for a variety of education and research needs. Ideally, KDL’s digital content access would facilitate some form of content curation, allowing users to pull materials from among KDL partner institutions to create their own personalized collections. KDL should further explore the ability to not only create collections for personal use, but to share their value-added content with the KDL community. For example, KDL could provide the means for educators to create and share customized lesson plans utilizing KDL’s holdings or students to use KDL material to create digital exhibits. Integrating curated content furthers KDL’s mission to “enhance scholarship, research, and lifelong learning” by giving educators and scholars not only a place to find information, but to put that information to direct use and share their work with the greater public.

**IV. Subscription Based Model**

After surveying and analyzing the financial structures of consortium digital libraries across the country, the workgroup determined a subscription-based model is critical for establishing a sustainable and efficient digital library for the Commonwealth of Kentucky. It is recommended that partner institutions be charged a base fee to cover ongoing operational expenses, including a project manager salary, creation of promotional materials, and domain registration costs. This base fee may or may not be on a sliding scale determined by institutional size and/or annual budget. Additional fees should be charged based on the amount of content (by storage size) hosted by the KDL to cover the cost of storage, backups, and maintenance of the servers. Fees should be billed on a July-June fiscal year calendar and be based on the previous year’s expenses. After a two-year planning period, the subscription-based model will allow the KDL to be self-sustainable with little financial support from the state.
Consortium digital libraries operating under a subscription-based model include [Digital Commonwealth](https://digitalcommonwealth.org) (Massachusetts) and [Chicago Collections](https://chicagocollections.org).

V. Google Analytics Statistics

After the KDL was migrated to its new (and current) site in 2012 Google Analytics was employed to track use statistics. From January 2013 to April 2016, use is as follows:

- Over 1,313,000 sessions; average 32,825 sessions/month
- Over 1,042,000 users; average 26,050 users/month
- Over 10,297,000 page views; average 257,425 page views/month

Most users are located within Kentucky, including Lexington, Louisville, Frankfort, and Bowling Green. Google analytics also shows use across the United States, particularly New York and Atlanta, and internationally, including the United Kingdom, Canada, and Germany.

VI. Environmental Scan

The workgroup researched 18 digital libraries from around the country. A spreadsheet containing detailed information is available. We evaluated many different aspects of the services including the following: membership structure, partner institution types, funding, budgets, staffing and content types. During our meetings we discussed the consortium sites and looked for elements of the sites that we would like to include in a new KDL. In addition to subscription fees from participating libraries, many of the better sites have extensive funding from foundations, grants and government entities. Some of the best sites include [Chicago Collections](https://chicagocollections.org), [Calisphere](https://calisphere.org) and [DigitalNC](https://digitalnc.org).

VII. KDL Library & End User Survey Results

The workgroup created a brief survey that was sent out to various librarian groups. We had 50 responses to the survey. The majority of the survey responses were from public libraries followed by public and private universities, government agencies, historical societies and religious institutions. Respondents stated that KDL is used mostly for research and genealogy.

We were curious to learn if most libraries had a separate digital library. We learned that 58% of the libraries do have their own digital library. These libraries are using a wide variety of systems to make their content available...
including CONTENTdm, D-Space, Omeka as well as their ILS. We asked all participants if they would like to include their content in KDL. Unfortunately only 22 people answered this question and half would like to have their content included. In addition, 10 respondents indicated that their institution digitizes content in-house.

Those who responded positively to having access to storage opportunities were concerned about the cost but interested the possibility of having their information hosted. The majority of institutions could not provide metadata support.

The following is what responding libraries requested from KDL:
Libraries would like to provide access to the following items:

![Bar chart showing percentage preferences for different types of items]

Responding libraries and contact information is available. [Complete survey results]

The workgroup also surveyed end users with 15 total responses. The end users were contacted via email replies to their questions to the University of Kentucky. It was also publicized through social media. Unfortunately we were unable to post a link to the survey on the actual KDL website or KVYL site.

Most respondents cited Google as the way they found the KDL. Others were directed by a librarian or Facebook. The strengths of the KDL were cited as old photos, interesting content and ease of use. The weaknesses included lack of maps, tagging, updating the information and lack of publicity regarding the collection.
Those responding mostly found what they were looking for and 58% said it had an effective and efficient search.

Complete Survey Results

VIII. Promotion
The committee recommends the KDL be promoted at events like the Kentucky History Education Conference, KPLA, KLA and any other library or education conferences around the state. In addition, development of outreach materials could include social media tools such as Twitter and Facebook buttons to share links to items, embeddable banners for websites, search widgets, subscribable e-newsletters, print on demand promotional flyers, or customized apps.

Examples for inspiration: Calisphere, DigitalNC, and DPLA.

Promoting the Kentucky Digital Library to local schools could include visiting schools as well as creating and promoting education-specific materials such as lesson plans and study units, teaching activities, and online tutorials.

Some examples: Massachusetts Digital Commonwealth, Recollection Wisconsin, and Indiana Memory.

Fundraising promotions could include putting a “donate” button or a banner on the web page, similar to Recollection Wisconsin and http://texashistory.unt.edu/, as well as featuring an easy to use online store for purchasing reproductions, such as http://seekingmichigan.org/store.

A Kentucky Digital Library press kit could be created to offer guidance to contributing institutions for local promotion of KDL collections at their institutions, similar to http://scmemory.org/for-contributors/scdl-press-kit/.

IX. Ongoing Need for KDL
Although many institutions in Kentucky, including Berea College, Eastern Kentucky University, Georgetown College, the Kentucky Department for Libraries and Archives, the Kentucky Historical Society, Morehead State
University, Murray State University, the University of Kentucky, the University of Louisville, and Western Kentucky University, host and maintain their own digital collections, federated search across these platforms is useful and desirable to end users, whose research is topical and not bounded by the holdings of a particular institution. 50% of respondents to the institutional survey reported that they would like to have their content added to the KDL, despite the fact that 58% of respondents host their own platform.

Furthermore, KDL is the only digital platform for other institutions within the state, including Kentucky State University, public libraries, and smaller cultural heritage institutions, and state budget cuts affecting governmental agencies and higher education could affect the sustainability of existing institutional digital collections.

Many other states have robust, collaborative digital platforms, providing visibility to the state’s rich cultural heritage materials, often through the state library or archives. Examples include California Digital Library, Digital Commonwealth (Massachusetts), Digital Library of Georgia, Digital NC, Empire State Digital Network, Florida Memory Project, Indiana Memory, Louisiana Digital Library, Minnesota Digital Library, Portal to Texas History, POWER Library (Pennsylvania), Recollection Wisconsin, Seeking Michigan, and South Carolina Digital Library. In addition, regional collaborative sites such as Digital Library of Appalachia and Mountain West Digital Library broaden access on a larger scale, as does the Digital Public Library of America (DPLA).

**X. Conclusion**

In closing, the workgroup would like to thank the Leadership Committee for giving us the chance to help shape the future of the Kentucky Digital Library. With the evolution of the KDL there is a great opportunity to advance the digital library, include more partners and provide additional resources to the students and researchers in the state. It is our hope that our assessment and recommendations make the case for KDL’s continued support and growth.