

**Title:** *Innovative projects in digital special collections: Bridging the gap between digitisation and knowledge creation*

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## Abstract

Many libraries today possess a wide range of digital content that is available 24/7.

There has been a move to digitise specialist local history and cultural heritage sources and it is not uncommon for users to stumble across low resolution local history images embedded into library catalogues. The provision of inferior quality sources results in missed opportunities to present exciting, engaging, immersive and interactive content associated with their digitised special collections.

With more specialised digital content being provided online by galleries, libraries, archives and museums there is a further shift from 'information provider and guide' towards 'knowledge curator', especially associated with niche interest topics, such as local history and cultural heritage. This paper discusses practical examples of libraries as knowledge curators, drawing on the author's own experiences working with large quantities of digital media to aid in the creation and curation of knowledge. Discussion will centre on projects at the University of Newcastle's Cultural Collections that use collaboration, crowd-sourcing, social media and other digital curation techniques and tools.

The main vehicle for conveying digitally curated content at the University of Newcastle Library is the *Living Histories @ UON* site launched in 2017. The site incorporates mixed digital content including video, audio, images, maps and text based information. Workflows are discussed in this paper, and how metadata is incorporated into the *Living Histories @ UON* digital content with a focus on how that content can be curated both automatically and manually into cohesive groupings that enrich knowledge. Examples of digital humanities curation projects on this site include: *Voices of the Hunter*, an oral history project which links information and

resources from two separate institutions for a richer experience; interactive timelines embedded with a variety of resources; project-specific geo-tag maps; and 'knowledge nodes' which act as a pathfinder to a variety of media on a particular topic. Central to these projects are community contributors, which aid in knowledge creation through use of the digital library tools.

This paper will inform and inspire library technicians to embark on their own digital humanities curation experiments to make their content more available and engaging while forming connections that build knowledge. Interactive digital projects can be implemented without a lot of financial support as there are many free online alternatives. Furthermore, crowd-sourcing, collaborations and partnerships, grants and volunteer programs all contribute to the affordability of projects.

## **Introduction**

For two decades galleries, libraries, archives and museums (GLAM) have been digitising their collections. In the past three years, cheaper digital storage and improved hardware has made it relatively easy to obtain and store high quality digital reproductions. There is a wide range of digitised and born digital material available on the web 24/7 but much of it is not free or useable. Information professionals need to move beyond simple digitisation and sites that are ‘containers’ for digital objects and embrace roles as knowledge curators. Digital libraries must now be people-centred, helping to enable interaction, communication and collaboration around their collections (Chowdhury 208). To support the knowledge economy they need to enable creating, engaging, interacting, connecting and repurposing around digital collections.

This case study will discuss practical examples in working with digital special collections to aid in creation and curation of knowledge at the University of Newcastle Library’s Cultural Collections. Central to this discourse is the community engagement platform launched in 2017, *Living Histories @ UON*. The paper will highlight features and functionality of *Living Histories* in relation to knowledge curation. The digitisation process and *Living Histories* workflow are briefly covered. Attention will be paid to special projects in digital history and examples of innovative knowledge curation.

## **About Living Histories @ UON**

Last year the University Library team went on a search for a replacement for Cultural Collections’ previous Digital Asset Management (DAM) system. The DAM that shall not be named had very little storage space, was difficult to use, was not Google-

friendly and was soon to be discontinued by the service provider. This DAM was a 'holder' for assets and did not offer features for user engagement. For a decade, the Cultural Collections team had been using Flickr for community engagement. This has been successful with over 42 million views. Though Flickr is great for engagement, it only functions for images. We needed a platform that had the engagement of Flickr combined with a DAM functionality. The team trialled and evaluated a variety of DAMs and while many functioned well as 'containers' few had the level of interactivity we required.

Serendipitously while on a trip to New Zealand, a member of the University Library team heard about a community engagement platform called Recollect<sup>1</sup> provided by New Zealand Micrographic Services (NZMS). Recollect exceeded our requirements, being highly customisable, easily Google indexed, mobile friendly, using persistent identifiers and supporting a variety of media. It excels at community engagement through user contributions, tagging, curating favourites, commenting and social media integration. The move from our previous DAM to the Recollect system reflects a wider industry trend towards a context-based, user-centred digital library (Chowdhury 217).

The [Living Histories @ UON](#)<sup>2</sup> site hosted on the Recollect platform was launched in February 2017.<sup>3</sup> The team at NZMS transferred 55,000 images from Flickr as well as thousands of hours of audio-visual material, publications and manuscripts onto

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<sup>1</sup> Further information on Recollect can be found at: <http://recollect.co.nz/>

<sup>2</sup> The Living Histories @ UON homepage: <http://livinghistories.newcastle.edu.au>

<sup>3</sup> The name 'Living Histories' is linked to a group that supports and unites local history interest groups in Newcastle and the Hunter, *Hunter Living Histories*: <https://hunterlivinghistories.com/>

*Living Histories*. They also transferred the comments and tags accompanying the Flickr images which provide contextual, searchable metadata.

The scope of the *Living Histories* content represents a melting pot of varied historical subjects including: Newcastle tertiary educational institutions, Aboriginal rock art, colonial Newcastle, trains, ships, Hunter Valley mining, winemaking, and ANZACs. Artistic works including natural history illustration and nature photography are also incorporated. Having varied collections in one platform facilitates new connections between digital assets and assists in serendipitous discovery.

Within these varied collections providing temporal and spatial information can provide much-needed context (Chowdhury 218). The Recollect platform has features such as geotagging and browseable maps. These add new dimensions to the collections, allowing users to zoom into the map and see historical objects associated with their suburb and street. Members of the system can also assign their own geo-location information adding further background to digital objects.

One unique knowledge curation feature of the Recollect platform is the orphanarium. This tool semi-automates linking between items by creating a list of data 'orphans' that are not linked to a record including people, places, events and organisations. Using the orphanarium, administrators can link phrases to existing items or a new item. For example, the people 'Jack Delaney', 'J. Delaney' and 'Delaney, John W.' occurring in the system can all be linked to a biographical person node about John W. 'Jack' Delaney. With this system, the challenge of keeping tags consistent becomes a non-issue.

## Community Engagement feeding Knowledge Curation

The role of libraries as 'engaged partners in knowledge creation' is expanding with increased collaboration (Case 152). Shifting the paradigm of the special collections library as information provider to knowledge creator starts with the 'target audience'. Cultural Collections has several major user groups: academics, students, researchers, local history groups, artists, writers and history enthusiasts. Thinking of these individuals as partners, stakeholders and collaborators rather than a 'target audience' recognises their participatory role in the knowledge economy. By contributing comments, tags and their own digital items these users are also contributing knowledge. In these instances, knowledge creation happens when users contribute their 'tacit' (internal, not publicly known) knowledge, turning it into 'explicit' (external, recorded) knowledge (Allard 369; Ichijo and Nonaka 72). This knowledge acquisition through user input results in the revision of metadata and further processing of digital items, creating a cyclical building of knowledge.

One challenge is in getting the attention of these contributors. Social media integration is vitally important to connecting with users. Hopkins, et al. (20) point out that libraries can enhance collections by connecting with online communities. The key is to make connections with thoughtful engagement in social media spaces and draw users into meaningful participation with converged media (Hopkins et al. 21).

Facebook, for example, has a vibrant and thriving community of history lovers. Any of the 'Lost' groups (i.e. Lost Newcastle<sup>4</sup>) possess users directly engaged in dialogue over historical matters. One example of how special collections can interact with Facebook users can be seen in the Northern Territory Library's *Lost Darwin*

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<sup>4</sup> Lost Newcastle: <https://www.facebook.com/groups/LostNewcastle/>

exhibition which curated content collected directly from Facebook<sup>5</sup>. *Living Histories* allows users to share found items on Facebook with one click. Users can also curate their own content by adding it to their 'collection', which they can also share through social media. The site also features Twitter, Pinterest and Tumblr buttons to make sharing easy. Our team consistently posts links to *Living Histories @ UON* on Facebook, Twitter, Pinterest and our blog. This practice results in statistical rises in page hits.

## **The Digitisation Process**

Appendix 1 shows steps involved in the digitisation process falling into three major categories: digitisation, processing and engagement. The simplest part of the digitisation process is getting the physical items into a digital format. Making a digital reproduction of a physical object (such as scanning) is over-emphasized in importance to the digitisation process.

The benefits of digitisation are well-known but it is not enough to simply digitise an item and put it on the web with a bit of descriptive data. Rachel Franks (288) points out that without some form of 'storytelling' digital objects are disconnected. This aligns with the ideas around the contextual, user-centric digital libraries of the future (Chowdhury). Librarians should be serving as curators, choreographers and connectors for their collections with the aim of forming emotional connections with their audience and inviting response (Franks 289).

Reflecting this, the processing and engagement stages take the most work and are cyclical, each feeding into the other. Throughout all three processes, metadata is

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<sup>5</sup> For full conference paper *Lost Darwin: an experiment in "distributed curation" through social media* see: <https://informationonline.alia.org.au/content/lost-darwin-experiment-%E2%80%9Cdistributed-curation%E2%80%9D-through-social-media-0>



key. As technology and metadata standards change over the years we often revisit old metadata to refine or update it. When Cultural Collections first started digitising, geo-tagging items was not considered. With today's digital mapping technologies it is useful to go back and geo-tag items.

Cultural Collections has had a thriving volunteer program for over a decade and our digitisation process relies on volunteers. Currently our volunteers' average around 200 hours of work per month combined. Without the efforts of our volunteers, we would not be able to digitise to the extent that we do now.

## **Workflow**

As discussed earlier, during the initial stages of the digitisation process, metadata is put into a spreadsheet, refined and prepared for upload. Metadata elements are based on a modified Dublin Core and include information such as: title, provenance, date of creation, creator and collector. The workflow for uploading to *Living Histories* includes preparing the Excel spreadsheet by checking for system compatibility and saving as a .csv, opening the .csv file in NoteTab and editing out the characters that do not conform to UTF-8 standards and saving as a .csv, then uploading the edited .csv file and assets into the system as 'private' nodes. Once in the system, the orphanarium can be used to link up any missing connections and create supporting information nodes. Once the administrator is satisfied with the nodes, they can be made 'public' through a batch edit. A chart depicting the *Living History Workflow* is included in Appendix 2.

## **The Projects**

Individual members can contribute to *Living Histories* but the most active public use of this platform is as an outlet for groups of individuals to store, display and curate their content. Use of the platform has been encouraged by public demonstrations and events. Forming partnerships with local history organisations and special interest groups increases both our user base and content. For example, the Hunter Rainbow History Group<sup>6</sup> are creating oral history interviews with prominent LGBTIQ figures in the Newcastle area. The ability to link content encourages groups to seek out photos within the system complementary to their content. For example, a mention of the Great Northern Hotel in an oral history interview transcript was tagged with a photo of the same hotel, directly linking it to another collection and enriching both sources.

Some organisations within the community want to be less involved with uploading and curating the content themselves and in this case, we upload their digital collections for them. One example is the images from a Cessnock local history group, the Coalfields Heritage Group<sup>7</sup>. Many organisations have given us feedback that putting their photos into *Living Histories* makes their collections more accessible and increases awareness of their organisation within the community. In some cases these partnerships end up in unique collaborative projects.

The *Voices of the Hunter* project<sup>8</sup> is a collaboration between the Cultural Collections team and the Coalfields Heritage Group. Over 500 cassette tapes of oral history interviews from the 1970s and 1980s conducted by local Cessnock historian, Jack Delaney, were digitised and made accessible online. These were made searchable

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<sup>6</sup> Hunter Rainbow History Group on Living Histories: <http://livinghistories.newcastle.edu.au/nodes/view/59991>

<sup>7</sup> Coalfields Heritage Group on Living Histories: <http://livinghistories.newcastle.edu.au/nodes/view/59991>

<sup>8</sup> Voices of the Hunter: <http://livinghistories.newcastle.edu.au/nodes/view/56157>

by addition of summaries of the content discussed. Workshops were held to encourage the community to create their own content. The project was supported by a grant from Coal & Allied and by hundreds of hours of volunteer work. *Living Histories @ UON* provides opportunities for users to search the topics discussed in the tapes and to link the oral history interview to other items in our collection such as maps, people, places, photos and other interviews. This collection is priceless to local genealogical researchers as they can search for any mention of family members within the entire collection. Perhaps the most unexpected outcome of the *Voices* project is a unique and specific cultural knowledge dataset.

The special collections repository can support 'non-traditional research outputs' and display unique research datasets. Allan Morse collected over 5,000 wine labels as part of his thesis on wine label design. *Living Histories* has a copy of his thesis alongside the digitised, searchable and browseable collection of wine labels. The files and metadata for these wine labels can be bulk downloaded and used for further analysis. The collection can be further supplemented by user contributions.

*Living Histories* is also used as a place to experiment and play with digital curation techniques. The flexibility of the system allows for HTML code iframes to be embedded directly into the nodes. *Living Histories*' 'timeline' nodes are produced using Knight Lab's TimelineJS<sup>9</sup> tool, which generates timelines from web published spreadsheets. Work integrated learning students learn about digital curation and presenting their work visually by using this tool to create timelines<sup>10</sup> on *Living Histories*.

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<sup>9</sup> Timelinejs: <https://timeline.knightlab.com/>

<sup>10</sup> Example of a Timeline node: <http://livinghistories.newcastle.edu.au/nodes/view/60255>

'Knowledge Nodes'<sup>11</sup> offer an opportunity for digital curators to create a pathfinder connecting to nodes on a particular topic. These can be embellished with images, slideshows, HTML text, YouTube videos and links. It is comparable to an in-system blog area where administrators can gather like content into groups. The knowledge nodes and timelines enhance digital storytelling across the platform.

## Supporting Open Access

Thomas Padilla's (1) *Collections as Data Imperative* explains that thinking of digital collections as data enables meaning making and enhances use of collections by opening them for experimentation. Padilla encourages making a space for experimentation and creativity (4). The Cultural Collections team want to support use of our data with use in Twitter bots, data visualization, text-mining applications, artistic works and many more applications that have yet to be dreamed up. The projects of Historian Tim Sherratt<sup>12</sup> are great examples of creative use of open data.

*Living Histories* has started enabling open access and the digital humanities by creating a specific 'open data' node type that allows for downloading of both .csv files and sets of image files. The platform assists us in providing access to collections as data, by allowing download of metadata sets in .csv files that can be manipulated in spreadsheet programs. This data can then be plugged into experimental data visualization tools such as the National Map<sup>13</sup>. Creative manipulations of media is supported by provision of free, fully downloadable, high

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<sup>11</sup> Example of a Knowledge Node "Natural History Illustration":  
<http://livinghistories.newcastle.edu.au/nodes/view/42978>

<sup>12</sup> Tim Sherratt's project <https://timsherratt.org/projects/>

<sup>13</sup> National Map: <https://nationalmap.gov.au/>

quality material. The site is also OAI-PMH<sup>14</sup> compliant, which makes it harvestable by services like TROVE<sup>15</sup>.

## Funding

*Living Histories* represents a substantial resource investment but not everyone has a budget for large-scale digitisation. Despite the cost of running a platform, we never charge for use of our content. However, the *Living Histories* site features a fundraising button on every node. Users can follow this link to contribute directly to the Vera Deacon Regional History Fund<sup>16</sup>, used to employ individuals on digitisation projects. When assets from Cultural Collections are to be used commercially, the requester is asked to donate to this fund. Our digitisation efforts are also supported by grants. The National and State Libraries Australasia Digitisation Research Project (29) concluded that demonstrating impact and value is key to securing funding for projects. Cultural Collections keeps statistics that prove engagement with our content and use these to seek further funding sources both private and public. Mass digitisation projects are often not viable and digitising in small project-focused bursts is often a successful strategy.

It is easy to be discouraged by the costs associated with digitisation and overwhelmed by planning and time considerations. Libraries need to make a concerted effort to utilise free technologies and make a case for a digitisation and digital special collections budget. Here are some tips for those just starting out:

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<sup>14</sup> Open Archive Initiative Protocol for Metadata Harvesting  
<https://www.openarchives.org/OAI/openarchivesprotocol.html>

<sup>15</sup> TROVE <http://trove.nla.gov.au/>

<sup>16</sup> The Vera Deacon Regional History Fund <https://uoncc.wordpress.com/vera-deacon-fund/>

- Start small and experiment with free platforms like Flickr
- Get your community involved and be active on social media
- Assemble a digitisation volunteer team
- Make QUALITY open access content
- Make a case for resource allocation towards digitisation
- Seek out grants and alternative funding
- Play, experiment and have fun
- Think of your collections as data and your users as collaborators
- Foster collaborative relationships with smaller special interest organisations
- Make connections between digital objects wherever you can
- Take chances, make mistakes, get messy

For those of you who have been digitising for some time, think about how you can support and encourage community engagement on your current platform. Supporting open data and datasets is essential. Interactive collections will be the most viable moving forward. The future of special collections is in collaborating and remaking digital collections. Great things are coming out of Paula Bray's DX Lab team at the State Library of NSW and I would recommend considering her ALIA Information Online 2017<sup>17</sup> talk for inspiration.

## **Conclusion**

Looking across twenty years of digitisation at Cultural Collections, what is the most important resource we have? It is not the digitised items themselves. As the years go on they often need to be digitised again. It is the knowledge that surrounds these

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<sup>17</sup> Keynote Paula Bray, DX Lab Leader, State Library of New South Wales:  
<https://informationonline.alia.org.au/content/speakers>

digital items and the user communities who contribute to it. Context, discussion, interaction and connections all give items importance not just to us but to the communities we serve. For us the Recollect platform is ideal for showcasing digital curation projects and for growing these connections and archiving the knowledge we have acquired thus far. In the digitation process, community engagement is key and feeds into the knowledge curation cycle.

Geo-tagging, maps, creating links between items, collaborating with users and multimedia content are all ways to make our collections more engaging. The examples of the *Voices of the Hunter Project*, the timelines and knowledge nodes all illustrate how these methods can be combined to create unique data sets that can be curated to tell a story. Making high-quality collections open and accessible and allowing downloading of datasets can further enhance re-usability of these collections.

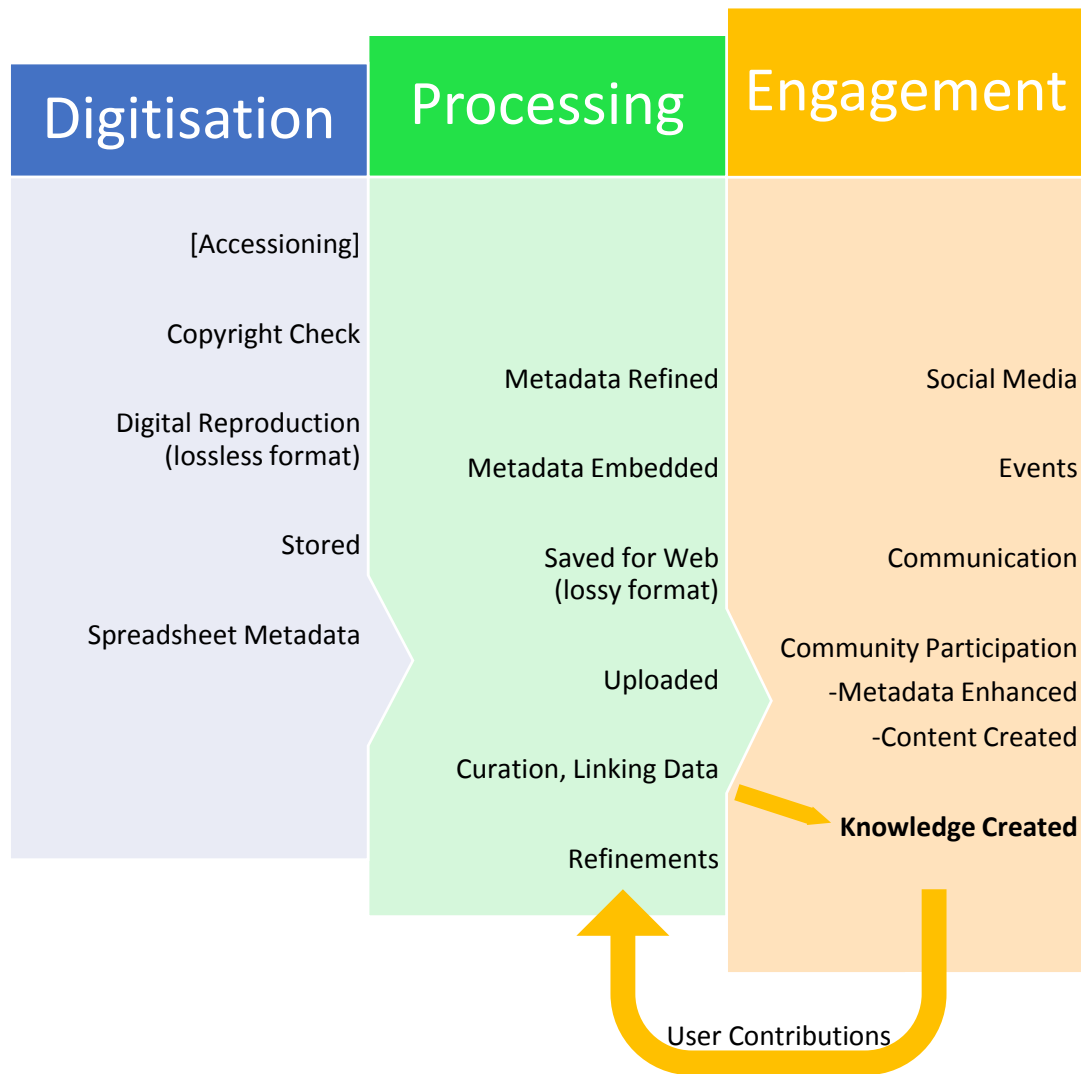
Whatever your situation, do not get wrapped up in the planning and logistics of digital collections. Start small and get a digitisation project that you are passionate about. Work with whatever you have, these projects can be started for relatively nothing. Share it with your local community and through social media and use these interactions to demonstrate value.

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## Appendix 1: The Digitisation Process



## Appendix 2: Living Histories Workflow

