Collaborative Project Development in the Creation of an Interdepartmental Digitization Workflow

Valerie Prilop (vgprilop@uh.edu)
University of Houston Libraries

R. Niccole Westbrook (rnwestbrook@uh.edu)
University of Houston Libraries

Elizabeth M. German (emgerman@uh.edu)
University of Houston Libraries

Abstract

Creating workflows that involve the work of multiple departments within a large organization can be challenging, especially when the procedure itself is complex and involves a number of stakeholders. This paper describes and evaluates a collaborative project to develop an interdepartmental workflow for the digitization of unique library materials in a mid-sized academic library. The project includes an automated project management and materials tracking system. Project development involved three separate departments with different reporting channels. In order to navigate this difficulty and manage the large size of the project, a visual planning technique that included graphical representations of current and proposed workflows, as well as implementation timelines, was used. This visual planning technique allowed the project team to clearly organize their thoughts and plans and proved helpful in soliciting buy-in from stakeholders. The paper will outline the collaborative planning process, addressing the rewards and challenges of tackling such a project within a large organization, and present lessons learned for others attempting similar endeavors.

Keywords: digital collections; digital library; collaboration; workflows

Introduction

Beginning in 2007, the University of Houston Libraries began a concentrated effort to create a publicly-available digital repository for the publication of primary source materials. While the Special Collections Department had been digitizing materials for some time, only a small group of these was accessible via Web exhibits. The effort to publish more of these materials in a central online repository led to the creation of the UH Digital Library (UHDL, http://digital.lib.uh.edu), which published its first collections in 2009. These initial collections were taken from materials in Special Collections, and Special Collections continues to be the primary contributor of materials. The UHDL, which as of this writing contains 44 published collections, receives approximately 30,000 page views per month.

The growth of the UHDL and the departments involved in digital collection creation since its birth in 2009 created a need for the reevaluation of the workflow for publishing materials in the digital library. The project described and evaluated in this paper is the resulting collaborative project to develop an interdepartmental workflow for the digitization of unique library materials. The paper will first explain the project background and the factors that led up to the need for a new digitization workflow. It will then describe the collaboration and planning process, discussing the visualization technique employed during planning and the means of eliciting buy-in from the various project stakeholders. Finally, it will describe the challenges encountered and review the lessons learned and rewards gained from the project. This paper will be of interest to other librarians interested in embarking on a variety of large-scale collaborative projects.

Project Background

The University of Houston is a large public university serving nearly 40,000 undergraduate and graduate students. The university libraries consist of a main campus library and four branch libraries, with the UHDL being a part of the main library. Over the past few years, the library has seen much growth and change, in part due to the rapidly growing student body and in part due to the university's quest for Tier 1 status. This has meant the hiring of additional librarians and staff and has led to an atmosphere that encourages innovation and teamwork. At the UH Libraries, collaboration between departments, absent any administrative prompting or direct oversight, is encouraged.

The two departments primarily involved with managing and publishing content in the UHDL, Digital Services and Special Collections, were also experiencing growth and change during this time. In response, in early 2011 both departments created new librarian positions, each having the management of UHDL projects as a primary responsibility. The Coordinator for Digital Operations, the new librarian in Digital Services, started in the position in April, and the Digital Collections Librarian for Special Collections stepped into the position in June. The addition of these two librarians allowed for more time and attention to be given to digitizing and publishing primary source materials. It had also became clear to the departments that the growth of the digital library, the library and the university necessitated a reexamination of the procedures and practices involved in digital projects. Both librarians were tasked with evaluating and revising the digitization workflow, and as this project moved forward, it turned into a large, collaborative project involving multiple departments and stakeholders. The third main department involved in the workflow project, Web Services, a new librarian, the Web Services Coordinator, in late 2010. These three departmental additions and the overall push toward change and new modes of working together within the library created a situation in which a large collaborative project was welcome, even though it might result in great change for the departments involved.

The Need for a New Workflow

A new digitization workflow was needed in order to address a number of issues present as a result of the change and growth at the UH Libraries. First, the UHDL was a successful service that had grown beyond the parameters addressed when the digital library procedures were first implemented. The original workflow was less formal than this growth and the addition of digitally-focused librarians necessitated. Additionally, the push for Tier 1 status for the university brought about an increased emphasis on research and service to graduate students and faculty, and access to primary source materials became an important component. In short, the UHDL and by extension the digitization workflow needed to be scaled up to meet the rising demand and expectations.

The addition of the two new, digital projects-focused librarians in Digital Services and Special Collections also added complexity to the existing workflow, which did not account for their roles and responsibilities. Both of the digital librarians were responsible for project management and oversight in their respective departments. From this emerged a desire for issues surrounding the management and oversight of digital projects that disrupted smooth project progression, to be addressed earlier in the project life cycle.

In addition to the changes brought about with the addition of new librarians, both departments were implementing policy and procedural changes that affected the development of digital collections. For example, Special Collections had implemented a prioritization process by which digital projects for the coming year were discussed and ranked. This allowed for more forward planning for projects, but it also meant that the initiation of digital projects needed to be handled differently. Similarly, the addition of the Web Services Coordinator to the Web Services department led to a formalizing of that department's procedures, which would in turn affect digital projects that relied on Web Services for special features and programming.
Finally, the departments involved realized that this time of change provided an excellent opportunity for addressing some of the problems in-

herent in the existing workflow. These problems involved miscommunication, a lack of accountability to project plans, disconnected forms and processes, and misunderstandings about procedures.

The Collaboration and Planning Process

Collaboration on the creation of a new workflow for digitizing materials to be published in the UHDL began organically once the new librarians in Digital Services and Special Collections were in place. These two librarians began meeting regularly to discuss existing procedures and practices and to brainstorm ways to streamline collaboration between the two departments. The focus of these discussions was such issues as:

- How to incorporate the new positions and account for changing roles within departments.
- How to eliminate bottlenecks in the current workflow, especially in view of the growing librarian, staff and student workforce in both departments.
- How to create a workflow that held all contributors accountable to project deadlines and expectations of quality.
- How to track and communicate the location of materials being digitized.

During these initial meetings, the two librarians had access to a large whiteboard and began to visually diagram the existing workflow as well as proposed revisions to it. Visualization of the workflow provided clarity to the discussion of complex procedures, ensuring that both librarians—representing viewpoints from their respective departments—understood existing and revised workflows.

The hand-sketched diagrams were captured using mobile devices and were eventually converted into more formal visual documents that became the basis for the final revised workflow. The team found that visual workflow diagrams were not only easier to recall and internalize, but also aided in explaining workflow ideas to those less intimately familiar with digital project processes and procedures. The visualization of information, as opposed to the creation of narrative documents, was a strategy that was carried through the remainder of the workflow planning process. When documents were necessary, this process, too, was largely collaborative and relied heavily on the joint writing and editing features available within Google Docs.

The team soon realized that revisions to the existing workflow could be supplemented by the creation of an automated system to track progress and decisions made for all digital projects and to communicate the location of materials being digitized. Therefore, with the revised workflow mostly in place, the Web Services Department was consulted and the Web Services Coordinator became a third collaborator on the project. With the help of this new group member, the team was able to identify how to work more effectively with Web Services personnel on digital projects and these ideas were incorporated into the visual workflow. The revised workflow now documented work in three departments to complete a single digital project—a practice that occurred in the past, but was never thoughtfully planned or documented.

Once the team of three was set, detailed project planning and development continued with no project or departmental lead. Rather, leadership of the project was equally shared among all three members and departments. While technically one person had to set up the meeting within the library's calendar software, there was no designated meeting leader. For most meetings, time at the beginning was spent reviewing information from the previous meeting and outlining the goals for the current one. At the end of each meeting, action steps were identified and assigned and plans were made for the next meeting. In the interim, documents created during or as a result of meetings, including visualization images, were shared among the team.

Because the revised workflow and automated system constituted a significant commitment of resources from three departments reporting to three separate associate deans, it was important to solicit buy-in at the staff, librarian, department head and dean level.

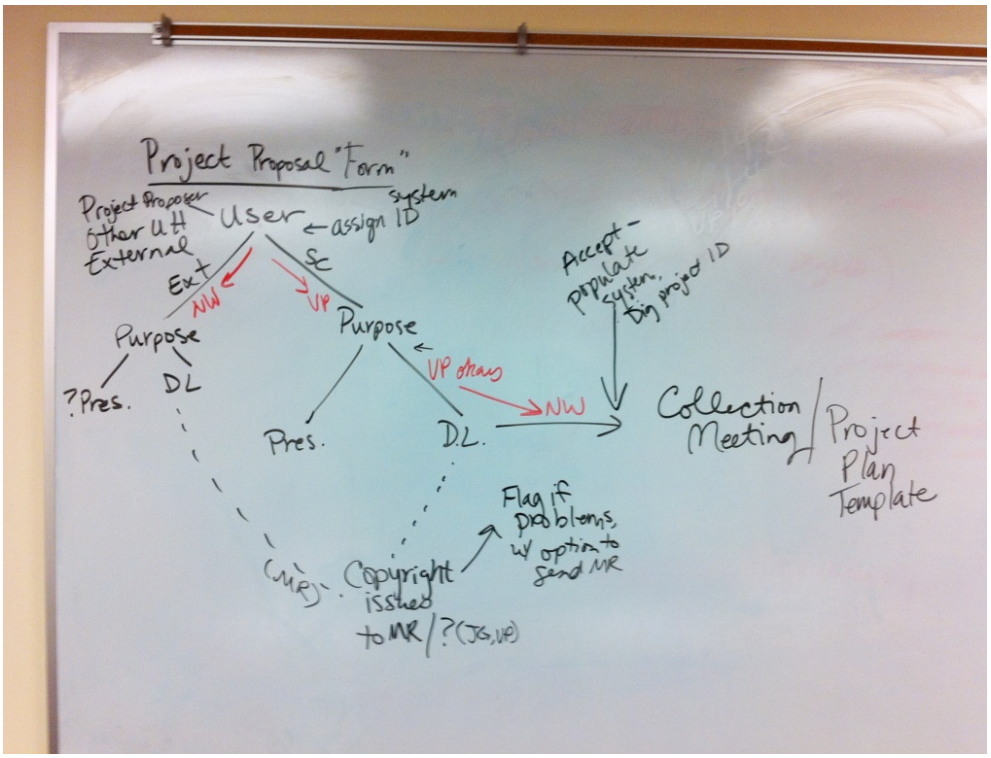

Figure 1: Visually diagramming the workflow

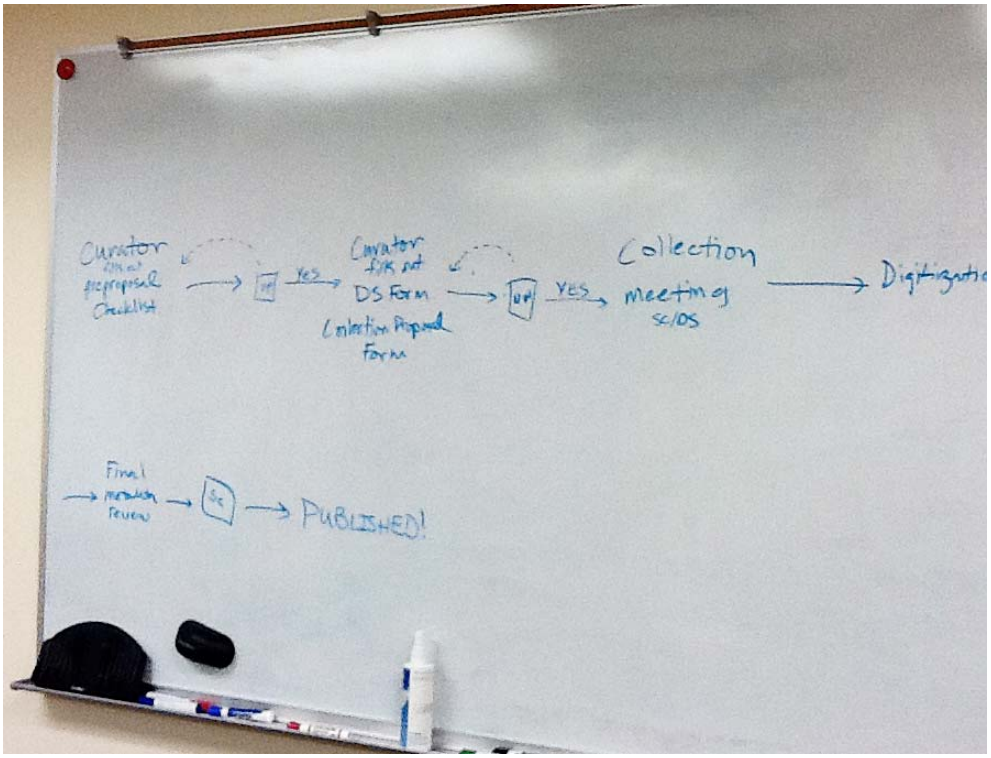

Figure 2: Visually diagramming the workflow

BY NC ND

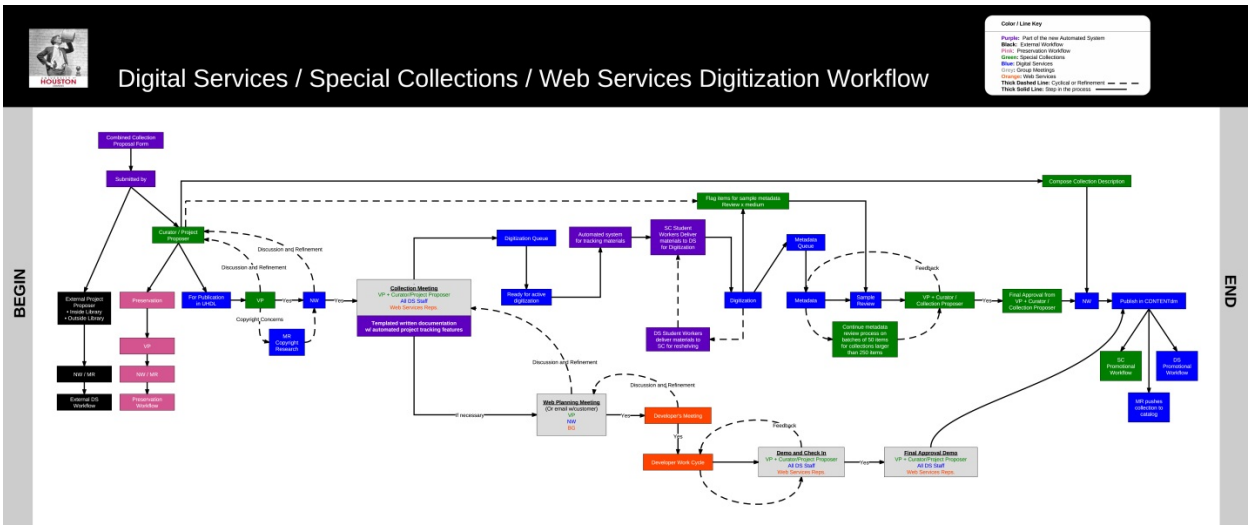

Figure 3: Proposed digitization workflow

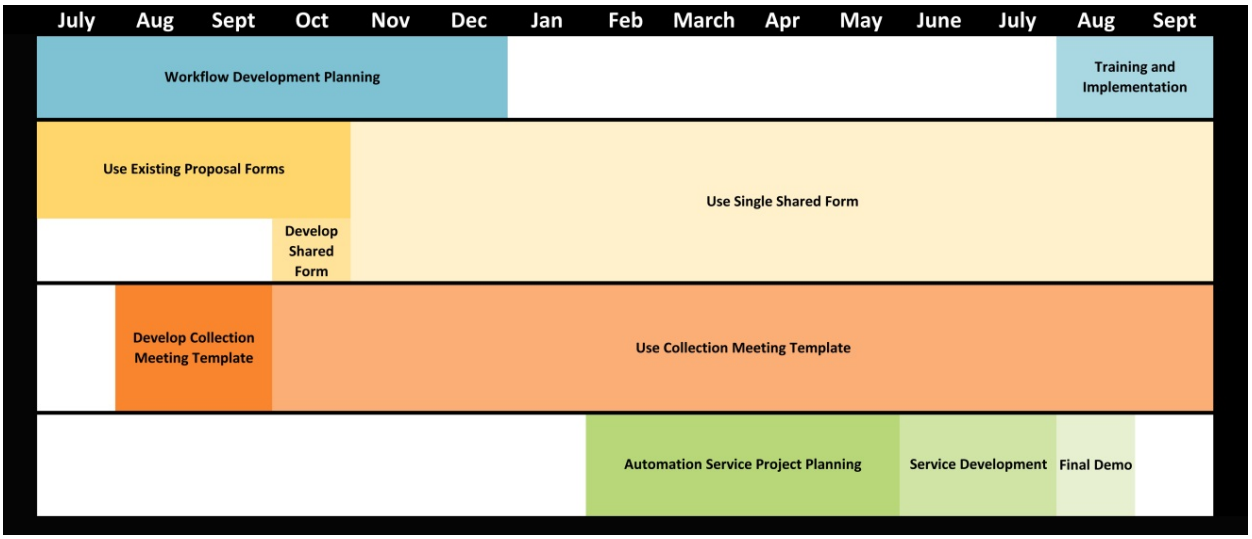

Figure 4: Projected project timeline

A formal presentation of workflow revisions and the plan for the automated system helped ensure the success of the collaborative project and relied heavily on the visualization of workflows and project timelines to communicate the proposed changes. In preparation for the presentation, the team worked together to identify potential questions and issues that might arise from the perspective of each stakeholder. The team was able to not only prepare a more thorough and customized presentation, but was also able to discuss and practice potential responses before voicing them during the presentation. While attendees were initially awed by the complexity of the visual workflow, the systematic presentation of the steps along with information about how the changes addressed the previous workflow problems allowed the team to clearly explain a sophisticated interdepartmental workflow to members of the library, many of whom were otherwise unfamiliar with digital projects procedures. During the presentation, the team also presented a visual timeline to help attendees understand the resource commitment needed from each department.

Seeing the complexity of the work followed by an outline of the time needed from each department prepared presentation attendees for the long-term nature of the project. At the con-

CC BY NC ND

clusion of the presentation, the project was approved to move forward with no significant changes requested by stakeholders.

Challenges and Lessons Learned

Before discussing the challenges faced and lessons learned in this endeavor, it is important to note one challenge that will be absent from the list: organizational resistance to collaboration. As previously mentioned, at the UH Libraries collaboration among departments is encouraged and actively practiced. In organizations where collaborative projects are not commonly practiced and the time required to undertake them is not respected, successfully completing such a project would likely prove to be more difficult and stressful for those involved.

This project faced other challenges, however. The first of these was the separate reporting channels for the project members. Because each librarian involved in the project reported to a different associate dean, each was being given different overall priorities and direction. In order to represent both the best interests of the project and the respective departments, the three librarians had to be careful to communicate their respective departments' plans and priorities, and to keep these in mind while working through the project.

An additional related challenge was handling the interests and requests of other groups and committees in the library which had a stake in digital collections. As the scale of digital projects has grown, the number of interested parties and stakeholders has also increased. Two separate committees within the library, one dealing with access to digital and primary sources and one dealing with questions of digital collections priorities and directions, had acute interest in the progress and outcome of the digitization workflow. It was important for the project development group to communicate its plans clearly and achieve buy-in from these separate groups.

One of the biggest challenges faced in the development of the project involved scheduling and time management. The team dove into the project with no clear discussion of or idea about how long the planning stages would take or how large the project would become. Meetings became multiple hour affairs and were needed on a regular basis as the project scope and technical details grew. Rather than revisiting the scheduling strategy early on, the team proceeded to schedule meetings one-at-a-time. Because of the difficulty of fitting long meetings into three different librarians' calendars, sometimes significant time passed between meetings. In turn, time had to be spent reviewing what had been done in the last meeting and making sure everyone was on the same page before proceeding. In hindsight, the group should have scheduled regular, recurring meetings beginning in the early weeks of project planning.

Another big challenge that could have been averted early on was caused by the lack of knowledge about each department's workflows and processes. Because of the organic nature of the project planning, there was no initial period in which a road map was created for moving forward. Additionally, the librarians from Digital Services and Special Collections were relatively familiar with their common workflows and each other's departmental processes; in fact, the Coordinator for Digital Operations had previously worked in Special Collections. However the Web Services Coordinator was not as familiar with these processes and procedures, and the others were not as familiar with her department's methods. Because of this, there was occasional confusion and miscommunication and time was lost in translation and explanation. A better way to approach this would have been to take time to go over the relevant, individual department workflows in detail in the early days of the project.

Not all the lessons learned were a result of mistakes or negative experiences. One valuable lesson came about because of how well something did work. As previously mentioned, toward the end of the project's planning phase, a presentation had to be made to a large group of stakeholders. At the conclusion of the presentation, the team asked the stakeholders to approve the project to move forward, suggest revisions to the project so that it could be approved to move forward, or halt the project. During presentation planning, the team prepared and practiced strategies to use in the case of the latter two de-

CC BY NC ND

cisions. Thanks to the visual presentation method, a carefully planned presentation, and support from stakeholders, the project was approved to move forward with no suggestions at that time. Although this presentation preparation took a considerable amount of time spanning multiple meetings, in the end it was justified by the response from the stakeholders and the agreement, and in fact encouragement, to move forward with the project.

The final, perhaps most enduring, lesson learned by the team as a result of this collaboration was how to work together effectively. The organic team collaboration that emerged from this interdepartmental project helped build a bond between three relatively new librarians in the UH Libraries and paved the way for future collaborations among the departments, which in the past had sometimes been difficult. The Special Collections, Digital Services and Web Services Departments continue to work together on a variety of projects, and often the work of these projects is coordinated by the same team of three librarians who worked to revise the digitization workflow. During the planning, presentation, and implementation phases of the workflow project, the team gained knowledge about each other's strengths and weaknesses and each department's quirks and issues, and learned effective techniques for working together to design and launch projects.

Conclusion and Future Directions

What began as a vague idea that the UH Libraries workflow for the digitization of primary source materials needed to be evaluated and scaled up to meet increasing production volume and demand became a project lasting more than a year from start to finish and which had an initial planning phase of approximately six months. This planning phase, and the project as a whole, had no chairperson, department head, or administrative personnel directing it. Almost all of the planning work was done collaboratively, involving librarians from three separate departments. By utilizing a visual planning model, allowing for the large amounts of time needed for planning, and keeping the channels of communication open, the initial planning phase resulted in a successful and ambitious project plan that was welcomed by the three main stakeholder departments and library administration.

While the plan originated with the Digital Services and Special Collections librarians, the early inclusion of the Web Services Coordinator allowed for the project to grow and for technical solutions to be considered from the earliest stages, rather than as an afterthought. As a result of this, an automated workflow and materials tracking system was incorporated into the project, and work on this phase of the digitization workflow development project is currently proceeding. In the meantime, all non-automated aspects of the new workflow have been implemented in a beta phase.

Aside from the lessons outlined above, perhaps the most important lesson for others to learn from this endeavor is simply that collaboration works, and it can work well. This team was able to complete revisions on the proposed workflow, present the proposed changes to library stakeholders to gain buy-in at all levels, and begin work on the automated system to support the new workflow in a truly collaborative fashion. It is hoped that others wishing to embark upon similar collaborations will be able to use this study and the resulting lessons to aid in their success