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Laying Down the Whack-A-Mole Mallet: One Inexperienced ERM Team's Story About Adopting the Agile Philosophy to Manage Electronic Resources

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Abstract

The transitory nature of electronic resources requires that staff and faculty working in this realm keep a vigilant eye out for the myriads of changes that inevitably come our way. We are often required to suspend a critical task for a more critical task, and keeping up with all the work we have to do is daunting, if not overwhelming. Electronic resource management (ERM) requires agility. If our aim is to provide superior customer service, we must continually adapt to the landscape of the day. ERM systems have made tremendous progress toward managing electronic resources in the last ten years. Unfortunately, they still lack some basic functionality that require us to use additional tools to complete our day-to-day work efficiently, effectively, and with agility. This is a summarization of the ERM team's adoption of the agile philosophy and the learning process in applying agile principles to electronic resource management.

An Unsustainable Workload, or: Too Many Moles to Whack

In the world of electronic resources, it always seems as if we are making a change. Something may be seriously amiss if an ERM team has not just completed a change, are not in the middle of making a change, or do not see a change coming on the horizon. From platform migrations to URL changes, package reconciliation to proxy issues, keeping up with the day-to-day work often feels less like electronic resource management than it does like whacking moles.

In 2015, the Western Michigan University (WMU) Libraries performed a systems migration that affected the way that the Electronic Resources Unit performed their work. Prior to our migration, our Systems Department was the administrator of our locally hosted integrated library system (ILS) and a locally hosted, open source discovery layer, performing the hardware and software upgrades, configuring and monitoring the system, and ensuring interoperability between these and the other systems used in the library and across campus. Systems programmers would also batch load records into the ILS for the Cataloging and Electronic Resources units. At the time our Systems people were maintaining our locally hosted systems, the Electronic Resources Unit was also maintaining a cloud-hosted, single-source discovery layer, an electronic resource management and usage statistics application, and a separate link resolver that also lived in the cloud. These systems required minimal maintenance outside the general list of ERM tasks, such as activating and updating

collections, titles, and linking. Jointly, Systems and the Electronic Resources Unit managed off-campus authentication, with the Systems Department monitoring and maintaining the local server and Electronic Resources managing the configuration.

Post migration, the only system that remained consistent in terms of the system itself and how we manage it is the locally hosted authentication system, which is still a joint project between our newly named IT Services (formerly Systems) Department and the Electronic Resources Unit. Administration and maintenance of the new systems changed the work of both IT Services and the Electronic Resources Unit dramatically. This move to a single source for our discovery layer, ILS, and link resolver lightened the workload of our IT Services Department but increased the workload in Electronic Resources. Post migration, the ERM Unit was no longer required to synchronize our holdings across three disparate systems, but became responsible for loading our own records and the records for the Cataloging Unit. We were also responsible for a much more hands-on discovery layer, configuring our own pipes to ingest content from our digital repositories, configuring the front-end look and feel, and tweaking normalization rules to make print and electronic resources more discoverable. Additionally, there were two certified ILS administrators in the ERM Unit, and I became responsible for coordinating shared administration of the ILS between five administrators in various departments throughout the library.

The ERM Unit's increased workload with the discovery layer, new workflows in the ILS, serving as

primary ILS administrator, and the fact that the migration created copious amounts of additional work to keep our usage statistics up-to-date was unsustainable. It was imperative we investigate new ways to keep on top of all the ERM work that needed to happen. In addition to all the new work taking place in the ERM Unit, the faculty lead of the unit retired, we were understaffed while the entire library underwent a structural reorganization, and we seriously needed to redistribute the work and cross-train all members of the unit. These challenges are what prompted me to experiment with a new way of doing things, which began with looking for a way to keep up under the new workload.

For the first year after we migrated to our new systems, I was still using e-mail accounts, calendars, both physical and virtual lists, and other cumbersome methods of keeping track of the work that needed to be completed. Using the electronic calendar to keep track of platform migrations and other time-sensitive changes was competing with actual meetings and scheduled appointments. E-mail notifications from vendors had a natural tendency to slip to the bottom of my departmental and personal e-mail in-boxes, which were becoming too large to be efficient, and electronic and paper notes got lost or temporarily misplaced when needed. The first step was to find a way to make sure that time-sensitive work did not get buried in a super-abundance of physical or electronic paper, ultimately causing access issues for the user.

A Light in the Darkness, or: A Better Mallet

The process of transforming the work of the unit began when I created a physical board in my workspace, with clear divisions, that served as a visual reminder for projects currently underway and important changes on the horizon. The system I developed, unknown to me at the time, was actually a long-established method of agile project management, called Kanban, that had been developed and used in the Japanese auto industry. The discovery of Kanban led me to research agile project management and search for an agile management tool that would work the same way as the physical board I was already using.

It is unfortunate that there is no good way for ERM staff and faculty to keep information about their electronic resources within an ILS. For example, when a notification is received a few months in advance that a platform will be migrating, a reminder

on migration day would be helpful. Updating off-campus authentication configuration and a few URLs, quite possibly more, needs to be done just in time. Testing and possibly tweaking your changes, often with help from a vendor, often occurs. All the information related to this work comes in many forms—Web pages, e-mail threads, telephone calls, and tickets in a ticketing systems. Keeping all this documentation in a single location is not possible in either our previous or our current ILS. The method of creating a task exists, but it is too click-heavy to manage and there is no way to attach any documentation or create a recurring task. We needed an electronic version of my physical Kanban board with the capability of attaching documents, creating reminders, and setting recurring tasks.

In a nutshell, a Kanban board consists of a workspace divided into sections with cards that represent tasks that move through each section of the board. The most common Kanban board configuration is one with “To-Do,” “Doing,” and “Done” columns that contain cards. The cards are the tasks that need to be completed for the project, and each card moves through the columns as the work progresses. The project is complete when all the cards end up in the “Done” column.

My quest for the e-version of my Kanban board revealed a number of possibilities, and after selecting a free version of an agile management tool, I created a board to help me stay on top of my personal workflows and started adding cards for the tasks that I needed to keep track of. I set due dates in order to have reminders pushed to me at the appropriate time. I added subtasks, uploaded spreadsheets and other documentation as necessary, made notes on the progress of my work, and generally began moving all my work from various systems into a single project that so far has been able to handle it all. As my project board evolved, I created recurring tasks for things that I need to take care of periodically, in addition to the all the random little electronic resource moles that pop their heads out all of a sudden. After a couple of months, I decided that this solution was working well for me. My calendar was actually useful to myself and to others now, I wasn't moving from application to application to find information about a change, and I could start to see all the little electronic resources just before their heads popped into view.

After successfully testing and implementing a Kanban board to manage personal workflows, I started

thinking about a project board for our usage statistics workflow. There had been some serious regressions since we migrated to the new systems, and the workflow might benefit from a new method of carrying out that work. After our migration, we lost the ability to upload any COUNTER usage statistics report other than the JR1, and we needed to archive all our reports to inform collection development decisions. Additionally, we were no longer able to take advantage of a service that our previous ERM vendor provided. This service would download all the COUNTER reports not harvested via the SUSHI protocol and upload them into the reporting tool on our behalf. SUSHI harvesting also lost ground, with approximately half the number of configured accounts than our previous system had and no way for us to configure new ones ourselves. We needed to request that each account be created for us, and this could take months for each vendor platform.

A further complication was that there was no built-in mechanism for easily tracking the work of collecting usage statistics within our new ILS. We had a list of vendors that included both print and electronic resources, and there was no way to select a list by vendor type, no way to export any administrative credentials, and no clickable links in this area of our ILS. This loss of functionality added an additional 200 person-hours per year to the work of the unit. For nearly a year, we needed to maintain a spreadsheet with the necessary information to log in and download statistics from each vendor platform. This meant that when passwords needed updating, we did so in the ILS and the spreadsheet, which is an unnecessary duplication of work for the 21st-century library. Finding a way to streamline this as much as possible, while equitably distributing the work, was of paramount importance.

Of course, we could continue to do this work with a spreadsheet, but the last thing anyone working with electronic resources wants to do is work with a spreadsheet when there is an alternative. If we could easily share the work between three people, be cross-trained to handle unfamiliar steps, and have those extra pairs of eyes on the process, we might find a much better way to get this work done quickly.

I introduced my colleagues to the agile application I had been using as a possible alternative to the new, arduous task of managing usage statistics. I suggested we divide the work into three steps: Download, Upload and monitor SUSHI accounts, and Archive. We created a Kanban board that mirrored

these steps, added data from our spreadsheet, and began working. We adjusted this project several times during the process, adding custom fields, tags, and recurring tasks, all while in the process of gathering, uploading, and archiving usage statistics.

Becoming Agile, or: Fewer Blisters on Our Palms

One of the principles of the Agile Manifesto is to “Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.” This required that we collaborate to map the workflows, outline the charter, lay ground rules, and to build, tweak, and complete the project. Although the process of analyzing this workflow and using a new tool to set up and carry out the work took valuable time out of every team member’s workdays, it produced a sustainable, reusable, and scalable project. Using the agile management tool cut five person-hours of work time over the spreadsheet method. We saved several hours by examining the workflow more closely. There are three team members fully trained in all aspects of collecting and managing usage statistics, and the work is equitably distributed.

As we were developing our usage statistics project, the individuals working in the ERM Unit adopted the electronic Kanban method to keep on top of their individual workflows. Every member of the electronic resources team uses a personal Kanban board that reminds them, for example, to check the import profiles they monitor, the pipes we built to harvest data from our digital repositories, to delete unused hosts from the proxy admin, and to add and remove titles in our electronic collections. We have used this system for ongoing projects like configuring our discovery layer and ILS. We have used this application when completing projects to update our OpenURL button and branding on vendor platforms, testing screen reader software, and evaluating and streamlining workflows in other units and departments. We have collaborated with people in other units and outside our libraries on projects with and without a project end date. All of the example projects mentioned have been completed with great success.

Fortunately for us, just months after the ERM Unit successfully created and completed the usage statistics Kanban board, and we had it ready to go for the next round, our ILS vendor migrated from the outdated usage statistics tool, adding that functionality

into the ILS and greatly expanding its capability in the process. We are now able to configure our own SUSHI clients, so roughly one-third of our usage statistics no longer need manual harvesting. Additionally, we can upload most available COUNTER-compliant reports, not just the JR1 reports, so we will be able to do much better reporting from the ILS directly. There is still some work to do, however. We still cannot use the ILS to help us with the process of manually collecting usage statistics, but there is hope that in the near future we will be able to sort and filter vendor lists for electronic format only, and will be able to click hyperlinks that will take us to log-in pages. Additionally, it would be very helpful for us to have a method of keeping track of collection history.

What Is Next, or: What Other Moles Need Whacking?

Despite its success, we will no longer be using our usage statistics project as it exists now. We are currently working on a project that will encompass the entire ERM life cycle. This project will include a card for every electronic resource and include sub-tasks and reminders to do quotidian work like test off-campus authentication and update descriptions on our guides. We will be able to keep notes about platform maintenance, downtime, and access issues. We can attach title lists and other documentation so that the history of each electronic resource is at our fingertips, freeing the valuable time for actual ERM tasks. Each card will also send us reminders to evaluate our subscription for renewal and help us track when we market electronic resources to students based on content alignment with courses taught across campus. There will also be reminders for when it is time to collect usage statistics or check that SUSHI harvesting is working.

Another project in the early stages of development is one that we are hoping will give us a way to assess the value of the work that we do in the ERM Unit. This project involves mapping the 12 principles of the Agile Manifesto to our library's strategic plan, the core competencies for electronic resource librarians, and the ACRL standards for libraries in higher education. We will then map these to our projects, update our project plans to reflect the mapping, and look

for ways to use the statistics we pull from our agile management tool to assess the value of our work.

The agile management tool we are using allows us to see a visual representation of projects in terms of incomplete and complete tasks so we can keep track of our progress as due dates draw near, which is not something that we can do using task management features built into our ILS. Using an agile management tool, you can quickly determine if the work of the unit is out of balance, or easily determine whether a project is not making adequate progress toward its goals. This type of analytics promises to be a valuable tool to inform ourselves, administration, and other units and departments in the library of the work that we are doing (Figure 1).

Conclusion, or: End the Persecution of Innocent Moles!

There are many Web-based agile management tools freely available or by subscription that libraries can use to augment their current systems. We tested a few and found one that best fit our needs, but they all appear to be scalable to any size library or project that requires that work be completed in a single piece flow, where changes need to be made at any time, and where there is a high degree of variability in the work.

Projects are not limited to the number of columns in the Kanban board, or the number of cards that you add. Careful analysis of the project should help determine whether Kanban is the appropriate project management tool to employ in each case. We are currently exploring other methods of project management to determine whether we should use them to replace our Kanban boards, in conjunction with them, or whether they are conducive to managing our work in a smarter way.

All knowledge workers are project managers, and the general nature of managing the electronic resources life cycle seems conducive to the incorporation of agile management practices in many of our workflows. At the very least the increase in our productivity makes electronic resource management feel less like we are whacking moles and more like we are making a real contribution to our institution.



Figure 1. Ongoing discovery layer configuration project board.