

## BACKGROUND

The Ontario Colleges Library Service (OCLS) provides a suite of services to the province's 24 publicly-funded college libraries.

Our e-resource service provides management of electronic resources (database, ebooks, journals, streaming video, etc.) including:

- negotiating licence agreements
- managing consortial pricing with vendors
- setting up bids for new resources
- facilitating subscription renewals
- troubleshooting access problems

In spring of 2014, we undertook a project to build a custom electronic resource management system (ERMS) within our Drupal website in order to improve our workflow and tracking of information related to this service.

## BUILDING A CONSORTIAL ELECTRONIC RESOURCE MANAGEMENT SYSTEM

Coralie Leroux and Nicole Morgan, OCLS

## BEFORE ERMA

Prior to undertaking the project, information related to the e-resource service was tracked in a variety of different places:



When a single piece of information changed, such as a vendor representative's phone number, the Vendor Contacts webpage for use by library staff, a spreadsheet for internal use, and a webpage containing instructions for obtaining usage statistics. As our e-resource management service grew and with it, the body of information we tracked, we found that maintaining consistency between the various locations where our data was stored was taking more and more staff time. We also found an increasing degree of discrepancy due to human error in the updating process.

Both OCLS staff and member libraries had to consult a variety of different files and sites to locate different information, resulting in inefficiencies, confusion, and general dissatisfaction.

## A word on subscription management for individual libraries

OCLS doesn't only administer consortial offers, we also manage the individual resource subscriptions for any member library. We do this in a number of ways. In every library does.

Due to our consortial function, ERMA is a very important part of our ERMS. ERMA is an individual library could be much simpler, with fewer views and content types. On the other hand, we have a number of reasons for having resources or provide services to library patrons, there are many functions that we did not develop in ERMA but that an individual library could.

Building your own ERMS in Drupal could allow for a level of customization to your library's needs, such as the ability to create a new product. With our invoices content type and its relationship to Subscription nodes, ERMA allows you to create a new invoice for an individual library to fully replace such as modules as Acquisitions and Serials, or well not be a stretch. There are even Drupal modules available that enable integration with your existing systems, as well as the same data in two separate places for the sake of your OPAC.

## HOW IT WORKS

Different kinds of resource information have their own content types in Drupal, which are managed in a similar way. The Resource content type, an Access Details field, and the Offers content type, a Response Deadline field.

With a content type, you can create as many nodes (web pages) as necessary. Examples of Vendor nodes are EBSCO, ProQuest, and Gale.

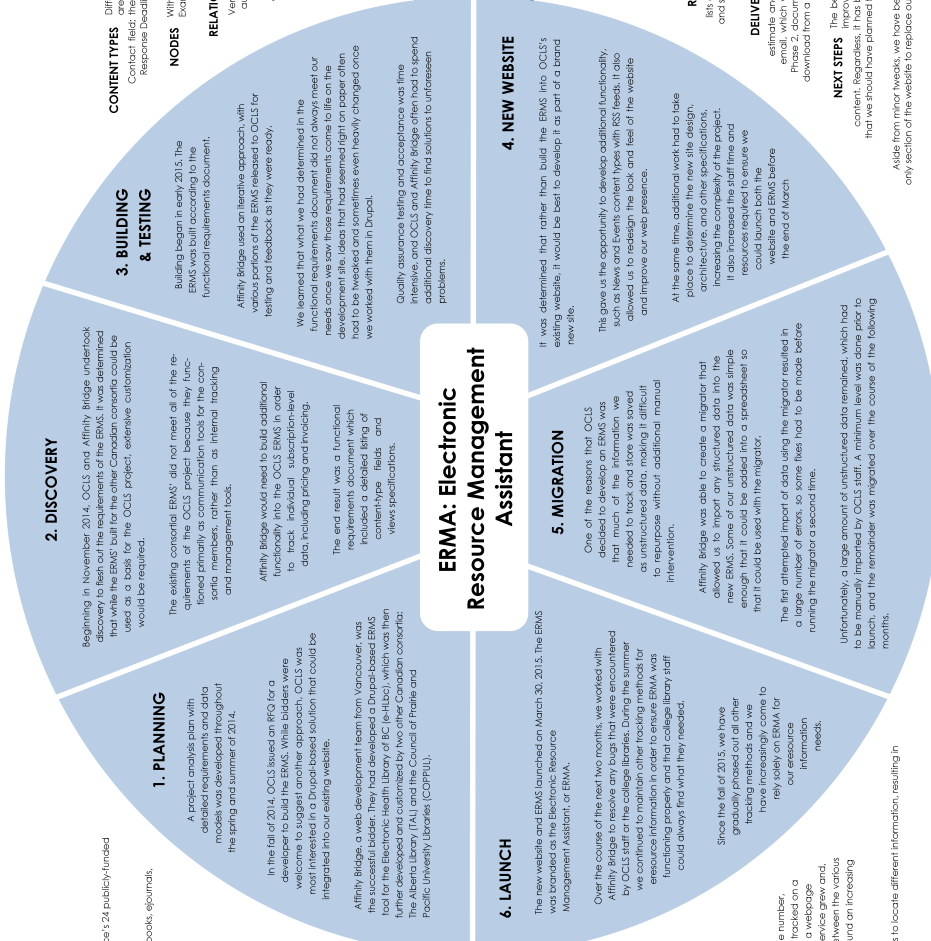
**RELATIONSHIPS** Nodes from different content types can be linked to avoid duplication of data. For example, a Vendor node (for ProQuest) can be linked to a Resource node (for ProQuest) and automatically pushed to Resource pages linked to that vendor.

**VIEWS** With Drupal Views, information from content types to be displayed in Vendor nodes (for ProQuest) can be filtered to show only the information from the Vendor content type can be mixed together, for example, information from the Vendor content type is displayed in the Vendor Contacts view, but also appears in eResource and Offers views. Views can be sorted or filtered to show for easy discovery.

**USER ROLES** Various user roles were created so that different permissions could be set for different fields and views. For example, staff could be given access to administrative views that are not accessible to college library staff.

**ACKNOWLEDGEMENTS** ERMA is the result of the work of many staff at OCLS including Thomas Guindard, Nicole Morgan, Coralie Leroux, and the staff of Affinity Bridge and the staff of the Ontario Colleges Library Service. The work of Affinity Bridge and the staff of the Ontario Colleges Library Service is gratefully acknowledged. The original version of the poster developed prior to ERMA Phase 2 and presented at October 2015, is a result of the work of Coralie Leroux and Nicole Morgan. The work was designed by Thea.

## ERMA PHASE 2



### 1. PLANNING

A project analysis plan with detailed requirements and data was developed. The plan was then used to create a Request for Proposal (RFP) and was presented to the spring and summer of 2014.

In the fall of 2014, OCLS issued an RFP for a developer to build the ERMS. While bidders were invited to submit proposals, the most interested in a Drupal-based solution that could be integrated into our existing website.

Affinity Bridge, a web development team from Vancouver, was the successful bidder. They had developed a Drupal-based ERMS tool for the Electronic Health Library (EHL) (e-hl-b.ca), which was then further developed and customized by two other Canadian companies: The Alberta Library (TAL) and the Council of Prairie and Pacific University Libraries (COPPL).

### 2. DISCOVERY

The existing consortial ERMS did not meet all of the requirements for the new ERMS. They focused primarily on a collection look for the consortial members, rather than on internal tracking and management look.

Affinity Bridge would need to build additional functionality into the OCLS ERMS in order to track individual subscription-level data, including pricing and invoicing.

The end result was a functional requirements document which included a detailed listing of views specifications.

We learned that what we had determined in the development site ideas that had seemed right on paper often had to be tweaked and sometimes even heavily changed once we worked with them in Drupal.

Quality assurance testing and acceptance was the additional discovery time to find solutions to unforeseen problems.

### 3. BUILDING & TESTING

Building began in early 2015. The ERMS was built according to the functional requirements document. Affinity Bridge used an iterative approach, with various portions of the ERMS released to OCLS for testing and feedback as they were ready.

We determined that we needed our needs and we saw those requirements come to life on the development site. Ideas that had seemed right on paper often had to be tweaked and sometimes even heavily changed once we worked with them in Drupal.

Quality assurance testing and acceptance was the additional discovery time to find solutions to unforeseen problems.

### 4. NEW WEBSITE

It was determined that rather than build the ERMS into OCLS's existing website, it would be best to develop it as part of a brand new site.

This gave us the opportunity to develop additional functionality, such as new and event content types with RSS feeds. It also allowed us to redesign the look and feel of the website and improve our web presence.

At the same time, additional work had to take place to determine the new site design, architecture, and other specifications, increasing the complexity of the project. It also had to be completed to ensure we could launch both the website and ERMS before the end of March.

### 5. MIGRATION

One of the reasons that OCLS needed to track and store was saved as unstructured data, making it difficult to retrieve without additional manual intervention.

Affinity Bridge was able to create a migrator that allowed us to import any structured data into the ERMS. The migrator was able to import data enough that it could be added into a spreadsheet so that it could be used with the migrator.

The first attempted import of data using the migrator resulted in a large number of errors, so some test had to be made before running the migrator a second time.

Unfortunately, a large amount of unstructured data remained, which had to be manually migrated over the course of the following months.

### 6. LAUNCH

The new website and ERMS launched on March 30, 2015. The ERMS was branded as the Electronic Resource Management Assistant, or ERMA.

Over the course of the next two months, we worked with Affinity Bridge to resolve any bugs that were encountered by OCLS staff or the college libraries. During the summer we continued to maintain other tracking methods for resource information in order to ensure ERMA was functioning properly and that college library staff could always find what they needed.

Since the fall of 2015, we have gradually phased out all other tracking methods and we are now fully relying on ERMA for our resource information needs.

### RENEWAL RESPONSE

Generating tables of upcoming renewal data and gathering response from our member libraries used to take a lot of time and involve several iterations per library. Our members can now generate and save information over multiple emails — now all of the data is complete, current, and readily available in one place.

### DELIVERY OF ACCOUNT DOCUMENTS

To process our members' vendor invoices, we establish a deposit account on their behalf. To estimate and balance process twice annually which can sometimes involve several iterations per library. We used to send account documents by email, which was not only time-consuming but resulted in misnumbered documents and problems with version control. With the implementation of ERMA, we now upload to the website, the relevant parties can always find them, and all vendors are clearly named and available for download from a single page.

### NEXT STEPS

The beauty of Drupal is that it doesn't require advanced skills to improve and develop ERMA's infrastructure. Some of our ideas for ongoing improvement are simple enough that we can do them ourselves, such as tweaks to our data export functions and the administrative views of our content. Regardless, we have a number of developments planned for our site. We realize now that we should have planned from the start of a collaborative workflow to be implemented once ERMA Phase 1 was complete.

Aside from minor tweaks, we have been looking at several new large-scale developments, including a tool that automates content creation for the next fiscal year, and a staff-only section of the website to replace our financial which we will use to share news, training documentation, and other internal content.