Electronic Resource Management Systems: Choosing and Implementing an ERMS

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Why would a library need an electronic resources management system (ERMS)? Most integrated library systems(ILS) cannot manage license and administrative information for e-resources very well. The volume of information is hard to manage manually – particularly when dealing with large electronic aggregators of journal content. Most library systems don't allow you to manage resources that fall outside traditional bibliographic formats very well – for example journal publishing platforms that might be licensed separately from the content that is published on them (e.g. Ingenta, Highwire). Most libraries also want to be able to push out information to users that are unique to e-resources: e.g. interlibrary terms for e-journals, scheduled "down time" with a resource. Many libraries are unable to keep up with cataloging title by title e-journals available through aggregators and turn to their ERMS as a way to produce an A-Z list of titles (and subjects) as an alternative to the catalog. For collection analysis, many libraries are looking for the means to combine usage data with payment information to produce cost per use reports quickly and automatically.

ERMS systems have been around since about 2001. Some libraries developed their ERMS systems in house (e.g. UCLA, Johns Hopkins) – however many realized that the expense of maintaining them and the capital needed to upgrade them could be considerable. Some of the other options available to libraries include a freeware version from UW-Lacrosse Library (http://murphylibrary.uwlax.edu/erm/). Some minimum ERMS functionality might exist in a serials vendor database (e.g. EBSCONet, SwetsWise, OttoSerials). There are some stand alone systems with little or no integration with your ILS (e.g. Serials Solutions, Colorado Alliance Gold Rush), as well as ERMS that can be integrated with your ILS (e.g. Innovative Interfaces ERM), or an ERMS integrated with your link resolver (e.g. ExLibris Verde, Serials Solutions).

In beginning to select or implement an ERMS, it is important for a library to ask itself several questions: What information do you need to track – for patrons and for staff? Who uses this information? Who should be using this information? What would you like to tell your patrons? (This information needs to be entered in fields that display publicly). What works well for you now? What needs improvement?

Budgets and staff considerations usually drive these decisions but it is important to determine what your library's most critical needs are that are not being met currently that could be met by an ERMS. The costs may go from free to tens of thousands of dollars. Is it licensing details? Workflow management? Renewals? Cost per use data? Overlap analysis? Ability to identify aggregator content better? Track troubleshooting and downtime alerts? Other questions you may ask: Is it a one-time purchase versus subscription cost? Does the vendor offer a hosted solution or locally hosted? Consider the hardware costs and upgrades as well as technical expertise if you are required to host locally. Be sure to factor in data population costs if the ERMS is not pre-populated by the vendor. Is there a knowledgebase (KB) that will need to be maintained? By whom will it be maintained? Will I still have to maintain data in several places? (i.e. ILS, Link Resolver KB, and an ERMS)?

Implementing an ERMS always has staffing considerations. You may need the same staff but hopefully they will work more efficiently (less spreadsheets, more ERMS). Those staff might need to work at a higher level which might affect your personnel budget. Work will likely need

to be redirected from other projects to bring up a system, while at the same time you still have to go on with the routine activities related to e-resources management. Initial data population can take several hours/weeks depending on system capabilities, the data you have on hand, and the availability of staff to work on it. In an ideal world, the ongoing data maintenance should be comparable to existing workload but will hopefully be cleaner and can be repurposed in different ways and the work done will not be redundant.

As you think about data population, it is helpful to prioritize data elements. Which fields are required? Desired? Not needed at this time? Are they customizable? What are the priorities for data entry? Bibliographic data? Acquisitions data? License data? Is any of it in machine-readable form or does it exist in the vendor KB? Who has the time and skills for data entry? Do I have access to IT staff to assist with any programming or troubleshooting? Subscription agents offer basic license data in their databases (e.g. EBSCONet, SwetsWise, OttoSerials) that allow one to export delimited licensing data, but it is the stock license, and might not be the version you have negotiated.

It is tempting to want to include everything, but experience has shown that it is best to be realistic in deciding on what to capture. Identify the most essential data elements you want to track – e.g. 12 license elements, cost data, usage, contacts information. What data can be batch loaded from local files or third party providers? (e.g. link resolver KB, subscription agents)? I s it possible to get a pre-populated database then adjust to match your local instance? Remember **you** have to keep the data up to date, so choose carefully at this point. *The Report of the DLF Electronic Resource Management Initiative; Appendix D: Data Element Dictionary* lists over 200 data elements that can be included in an ERMS.[i] You will likely not need all of them, so choose carefully those you need to track most often, those on which you might want to communicate information to your users, and those which enable you do your work better. This source can help you be consistent in your usage of terms such as “platform” and “provider.”

One of the most common challenges encountered in ERMS implementation is authority control. This is particularly true when trying to reconcile a vendor KB with standard cataloging practices governing title changes. In addition there are various name changes, mergers, and spinoffs in vendors. It is important to decide on your source authority and make cross references as appropriate to facilitate retrieval. (e.g. Informaworld/Taylor and Francis; Proquest/CSA/Chadwyck Healey). There are also various versions or manifestations of databases that need to be clearly identified for purposes of tracking content.

The most difficult area is often synchronizing data between an ERMS , your link resolver, and your OPAC. Vendor knowledge bases often rely on publisher data which might not recognize title changes in the electronic version of a journal title that appear in the print version. In addition, publisher changes are not often reflected in bibliographic records. Best practices are to identify a standardized data source and stick with it, making cross references wherever possible. Sometimes acquisitions data can be automatically synchronized between your ILS and your ERMS using an application programming interface (API). In general, it is best to avoid duplicate maintenance of any data. Holdings data should be tracked in your link resolver KB which can feed your OPAC records and provide an A-Z list.

The other area that frequently poses challenges to ERMS implementation is reporting ability. ERMS vary greatly in this capability. Choose a system based on its ability to provide the

reports you need regularly. Plan on using your IT staff to develop customized reports – assuming they can access the code and structure of your ERMS and have expertise in that area. Reporting requires that standardized data be input consistently.

Other areas that frequently cause confusion are reflecting licensing terms when the publishing platform and content providers have different licenses. A similar problem is that of "inheritance" when prevailing terms in a license pass on from a parent resource to its constituent resources, or when a journal title within an aggregator database has different terms of use than other titles in that same database.

It is useful to map the workflow process early on in implementation. This can help with establish authorization permissions . It is helpful to choose an ERMS which affords some granularity in permissions so that sensitive and confidential data can be protected and the integrity of the data be maintained. Many systems use these authorizations to drive the workflow process by means of "roles." Common roles include selection / trial, license review, order placement, troubleshooting, IP submission/ proxy update, cataloging, payment/renewal, usage statistics, and collection analysis. Some ERMS systems use a workflow management algorithm whereby trigger events that happen in a system will automatically generate e-mails to direct another staff member to perform the next activity. Unfortunately, you may have to adjust your workflow to match that of the ERMS.

More and more, ERMS systems are beginning to incorporate usage statistics into their system, allowing you to calculate cost per use by combining this data with acquisitions payment data. ERMS can have ability to go out and automatically harvest your usage statistics and store them in COUNTER compliant format, using a standard known as SUSHI (Standardized Usage Statistics Harvesting Initiative).[ii]

In summary, our experience has shown that it is important to get feedback from a lot of people in your organization (public services, tech services, IT support) when choosing a system. However, involve as few people as possible in implementing the system, as the process tends to get bogged down in debate over details. Keep in mind that nothing is carved in stone – be willing to make changes after implementation. Sometimes it is easier to key data in than work with formatting to import data coming from another party. Start with less data, and you can build on it, as needed. Get advice from other users and join user groups if they exist. Be a realist. The system you have purchased is likely to be the system you will have for a while. Enhancements and changes often come much later than expected. You are one of many customers. Do not expect your vendor to do a lot of customization for you. An ERMS is not an ILS nor a project management tool, do not expect it to be one. It does not resolve access problems, it only helps track them. Keep in mind you are dealing with a finite number of resources. It is a work in progress. Manage expectations. Keep the focus on what your users need most and put your energies there.

[i] Digital Library Federation, *Report of the DLF Electronic Resource Management Initiative; Appendix D: Data Element Dictionary*. August 2004.

[ii] Standardized Usage Statistics Harvesting Initiative. National Information Standards Organization. http://www.niso.org/workrooms/sushi (Accessed May 30, 2009)