

How to Manage Changes

So what *is* the *best* way for a library to go about managing its electronic resources? For library professionals who are trying to create or reinvent a workflow for staffing responsibilities—who are attempting to identify effective systems or service tools to support electronic-resource management—the path is neither obvious nor easy, especially considering that the technology tool developed to be the solution is still changing and growing.

As noted in this report, the services and systems currently available continue to develop and change in dramatic ways. Because of this continued change, and because ERMS are integrating a second wave of standards and research, this report is not meant to help libraries choose specific products; instead it is meant to provide an important skeletal overview of the ERM area. Understanding the basic structure, as well as the variable nature, of the ERM environment can help you on your path to choosing an effective system or service for your library's electronic-resource management.

Going Forward

Opportunities for standards development are proliferating, and these standards influence and encourage even more change in the available systems and services. Additionally, software and Web-application developers are increasingly embracing and working toward building more open systems, creating technology tools that, for example, could be comprised of two or more competitive vendors' systems that operate together to deliver a library's ERM needs. For example, Marshall Breeding reports on a vendor's utilization of a more open protocol (via incorporating the "Web-services architecture") in one of its brand new OPAC

products in a March 2006 *Smart Libraries* article ("OPAC Sustenance: Ex Libris to Serve-Up Primo"). According to Breeding, "One of the key characteristics of current software across industries involves the use of Web services. Based on XML data structures and well-defined protocols, the Web-services architecture allows components of diverse applications to exchange content and services. Primo incorporates Web services in its design so it can be easily extended to incorporate new services and to integrate its capabilities with external applications."¹

This ability to integrate systems—essentially the ability to import and export data among systems—will allow libraries to mix and match vendors of systems and services in an impressive and daunting number of ways. This aspect of ERM, too, is developing rapidly.

Staffing Techniques

For most libraries, the inclusion of electronic resources in the collection complements the existing work of print resources' acquisition; this simple truth means that we are all adding to our responsibilities and not eliminating any pre-existing ones, although we may be performing a fewer number of these tasks.

Some libraries have chosen to separate electronic-resource management tasks and staff responsibilities from the usual work associated with print collections. They have created discrete units, each charged to perform the distinct functions of selection, acquisition, implementation, and maintenance of digital content, which operate alongside, but independently of (insofar as any unit within a given library can act independently), the analogous print-oriented units. The logic here is that the new tasks associated with electronic-resource management require different skill sets, different workflows, different communication channels, and in many cases, higher staffing levels.

Other libraries—by distributing similar and related electronic-resource tasks among staff members who are already executing similar print responsibilities—have chosen to completely integrate new electronic-resource management tasks into the existing organizational structure. This model can work because it's very likely fewer print subscriptions are being selected, ordered, and managed in these libraries, and this lower level of activity in print-subscription management is freeing up staff time for new responsibilities.

In the middle ground, some libraries have opted to create electronic-resource management positions or units that oversee all tasks and responsibilities, which are distributed among staff members with existing print responsibilities. In this scenario, a library might choose to create one position or an entire department to oversee the range of tasks associated with electronic-resource management. This model takes into account both the new skills and staffing levels of the discrete electronic-resource management model and the unity concept of the entire library collection observed in the integrated model.

How a library chooses its own path depends on several things, including the size of the current staff, the size of the electronic-resource collection and plans for its growth, and the library's access to technology options. In addition to the size of the current staff, a related, critical consideration is the library's ability to add positions. Budgets in this era are not elastic, and adding new positions may not be feasible. Vacancies, however, can create an opportunity for libraries to rewrite job descriptions and redistribute old responsibilities.

In smaller organizations, staff members frequently have a variety of overlapping responsibilities. These smaller organizations are also more flexible in sharing new responsibilities, making it easier for such libraries to opt for the integrated model of electronic-resource management.

Larger libraries have larger print collections, and the impact of moving subscriptions from print to electronic can have a greater influence on staff availability. Libraries in this category can choose to integrate electronic-resource management into the print workflow, or they may choose to reassign staff to new work units that will manage the new electronic resources.

In either type of library, using a staff vacancy to rewrite a job description can allow a library to create at least one electronic-resource management oversight position.

Collection Consideration

The size of the electronic-resource collection and the library's plan for growing this collection will also be a factor in making decisions about how to manage it. Libraries may choose to move rapidly from print to electronic by canceling any print materials for which electronic versions are available as well as by actively seeking electronic alternatives for non-core print titles. This kind of accelerated

ramp up, from print to electronic, requires concentrated attention and is limited or made possible by staffing options discussed above, while the alternative—the slow and steady replacement of print with electronic over a longer period of time—is a more measured approach.

The faster-paced approach will free up staff more quickly, and this can enable a library to create a focused team dedicated to electronic-resource management. The slower-paced approach will allow libraries to distribute responsibilities more broadly.

In each case, though, the cautionary note is it's not likely that all of the print resources will disappear in the near term, and the management of these more traditional resources cannot be ignored or underestimated. Staffing must be maintained to service print collections, but the staff level either immediately, or over time, will decrease depending on the library's electronic-resource growth plan.

The Technology Factor

A third factor that libraries should consider is access to technology and technology support. Although most libraries do not exist independently and are part of larger organizations, access to technology and technology support from the larger organization varies greatly. The library with somewhat direct access to its own hardware, software, and that has trained personnel (who can provide support and administration for library systems) on its staff simply has more choice when it comes to determining how to staff ERM. Libraries with direct access to technology also have wider parameters when it comes to how quickly they want to grow their collections and what systems or services they might select to support electronic-resource management.

On the other hand, the library wholly dependent on its parent organization for hardware, software, and the parent organization's associated support is less capable of making independent decisions, and therefore is less capable of implementing technology-related decisions. This type of situation makes it necessary for cogent communication, about the library's technology access and support, to occur outside of the library. In such a case, a library's access and support—essentially, the services of personnel whose responsibilities and priorities are to provide access to and support the technology the library uses—is determined by this parent organization.

Tactically, then, access to technology and technology support has a great influence on a library's decisions about staffing and about planning for growth of the electronic-resource collection.

Sizing Up Library Needs

When a library has sorted out its staffing issues, determined its electronic-resource growth plan, and evaluated its access to technology, choices about electronic-resource

management systems become clearer.

At one extreme, for the smaller library with a limited staff, a modest growth plan, and only indirect access to technology and technology support, options include in-house spreadsheets or databases, subscription agent or other hosted services, or add-on modules to a pre-existing ILS. But a separate electronic-resource management system, one that requires servers, installation, maintenance, and administration, may be more than is needed and more than is serviceable.

At the other extreme is the larger library with the ability to create a comprehensive electronic-resource management team, a large-scale growth plan, and significant control of technology and technology support. For this type of library, anything is possible in the range of options for ERM systems, but local spreadsheets or databases are not likely to serve as well as a higher-end option, such as the stand-alone ERM system or an ILS add-on module. Most libraries are neither at one end nor the other but are rather somewhere in between.

Homegrown Solutions

Spreadsheets and small, homegrown databases are capable of handling less complex library situations. If there are only a limited number of staff that will be involved in selection, acquisition, and maintenance of electronic resources, data-entry permissions can be accommodated more easily. Also, if the collection of current and planned electronic resources is small, a spreadsheet is less cumbersome to store and share. If technology access is severely limited, it is still likely that a common spreadsheet application is already installed and available on a personal computer.

Although the DLF ERMI report identifies more than three hundred data elements, libraries using a spreadsheet approach can reasonably pick and choose among these elements to identify the key pieces of information necessary for their most basic needs. Using the prescribed identifiers from the DLF ERMI data-element dictionary will be helpful, because it could facilitate migration, at some later date, to a more elaborate system, which is also likely to use the DLF ERMI data element dictionary as its starting point.

Hosted Systems

Hosted systems may be useful in small and medium-sized libraries, ones in which the electronic-resource management responsibilities belong to one or a small number of staff and ones in which technology access is limited. These types of systems are capable of handling small, medium, or large electronic-resource collections.

Two categories of hosted services exist—those that are add-on components of subscription-agent systems and those that are add-on components of public-access management systems (such as TNet and Serials Solutions).

Because so much of the necessary information already exists in a subscription agent's system, libraries that have purchased access to a significant majority of their electronic-resource subscriptions via this one agent may find this option appealing. Libraries that have a pre-existing agreement with a public-access management vendor (to use an A-to-Z list or other product) may find this option a good one, because their holdings are then available to the vendor. An important workflow issue to explore is how many staff members will need access to the information in these hosted services and whether the necessary access must be read only or requires read-and-write permissions.

Stand-Alone Systems and Add-On Modules

For libraries with larger ERM staffing capabilities, large and rapidly growing electronic-resource collections, and a high degree of technology independence, stand-alone systems and added modules to pre-existing systems are the best options. Generally, although not absolutely, these systems are more full featured and are best able to serve a larger staff population with diverse needs and varying levels of permission requirements. Such systems allow for staff members, with different responsibilities, to view and add information that can be communicated outward to others as appropriate. These systems are also capable of handling a broad range of electronic-resource types, which are often found in large and assorted collections.

Although many of these modules are said to be able to work with an ILS built by another vendor, the tightest integration is likely to be found in the ERM system and ILS built and supported by the same vendor. When considering an ERM system built by a different vendor (in other words, a different vendor than the one from which the ILS was purchased), library staff should ensure that they understand how data is imported and exported and how well the systems actually operate with one another.

No matter what options a library chooses for staffing, for an electronic-resource growth plan, and for a systematic way of tracking the management of this collection, the implementation must include a transition project (in which the library gathers information about all previously subscribed electronic resources and enters it into the selected ERM tool). Much of the data already exists in a structured format, which will allow for export from one system and import to another. An ILS, a subscription-agent's system, or a public-access management service system currently holds data necessary for identification, location, and financial tracking. For these information categories, library staff must sort out where it exists, in what format it exists, how to export it, and how to import it into the new system or service. Because some categories of data are not likely to exist in one place or even in one format, some categories are more problematic.

The most prominent area of concern, though, will be the licensing terms. The process of populating an electronic-resource management system in this category will require that a staff member or members actually read through every license to identify the terms and conditions, then copy them over, or do the intellectual work of translating legal text into checked boxes in the appropriate fields. The skills appropriate to this type of task include familiarity with the licensing of electronic resources in general as well as the ability to discern subtlety in legal language.

To expedite this licensing task, licenses can be grouped by source. For example, a library may subscribe to several different databases from the same content provider. Under some conditions, the databases may be associated with one license that lists all of them. It also might be that these databases were subscribed to at different times, and in lieu of a license addendum covering the newer databases, a new license was signed. In fact, it may be the same basic license text with different names and dates. By grouping all licenses from the same provider, staff members cannot assume the data will be the same, but they can move more quickly through the familiar text and layout.

In the same manner, libraries can group together licenses for content made available through the same type of consortium license or through their individual organizational licenses. Another idea for expediting the process is to have all licenses scanned in a manner that allows copying and pasting of text. In the area of licensing and business terms for electronic-resource management, much information is currently in free text fields because the canonical list of possibilities does not yet exist. Rekeying text is time consuming and can lead to errors that are

avoidable in a copy-and-paste scenario. Populating the ERM database for the first time will be a time-consuming and challenging task, and libraries should be mindful that this should be treated as a priority project.

Conclusion

Librarians are likely to feel as though the incorporation of electronic resources into a library collection, as well as the comprehensive management of them, is not thoroughly mapped territory. We have seen great proliferation of electronic resources made available from content providers, and with the work of the DLF ERMI group, the library field has observed technological progress with which to handle these resources. We expect to see more progress in this area as vendors continue to develop their systems and new standards emerge (such as the work of the NISO-sponsored License Expression Working Group) and are addressed.

In the print universe, we have years of studies that show how long it takes to manage binding a title, cataloging a title, or shelving a title, and we know how to staff these responsibilities. In the electronic universe, we have no guides that tell us how many staff members we will need to handle a certain volume of material. Indeed, one of the things that we hope to see in the research area are surveys of how much time it takes to handle these items. Staffing effectively for electronic-resource management is still fairly uncharted territory.

Notes

1. Marshall Breeding, "OPAC Sustainance: Ex Libris to Serve-Up Primo," *Smart Libraries Newsletter* 26, no. 3 (March 2006): 3.