

Koha: ILS Vendor Evaluation for a Small Academic Library

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INFO 241-10. Automated Library Systems

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September 28, 2015

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“In the era of dynamic and unrelenting transformation, small academic libraries are challenged to continue essential legacy services while ratcheting up new projects that will enable students and faculty to engage in 21-st century research and learning,” Doherty and Piper observe. “Their small size can make them more agile and quick to adopt new technologies and workflows with compact communication networks, legacy flexibility in job functions, and fewer layers of bureaucracy and cultural differences with which to contend” (2015, pp. 160-161).

As part of this transformation, small academic libraries seek new opportunities to thrive in challenging economic times, making entrepreneurial cost-saving decisions and adopting new technologies. Many libraries, in order to reduce spending on proprietary integrated library system (ILS) subscriptions, opt for open source ILS products instead, “with Koha and Evergreen among the routine options considered, especially among small to mid-sized libraries of all types,” according to *Library Systems Report 2014* (Breeding, 2014). In the last year alone, ByWater Solutions—the official supporter of Koha in the United States—signed “68 agreements for support services for the Koha integrated library system (ILS), representing 150 libraries that span 205 branches and reflect a continued interest in open source products,” bringing its total client base to 785 libraries in the U.S., according to Breeding’s report (ibid.).

This paper presents evaluation of the Koha ILS as a replacement of a traditional proprietary ILS in a small academic library. It discusses the library background, main user groups and their information needs, and provides the rationale and criteria for selecting Koha as a new ILS vendor. Following Koha overview, the detailed ILS evaluation is discussed, including available modules, compliance with library standards, next-generation offerings, customization, consortial interoperability, pricing, and available vendor support.

Information used in the evaluation is based on several sources, including the vendor's website, published vendor reviews, implementation studies, comparative analyses of open-source integrated library systems, and library technology reports regarding specific initiatives on the part of the vendor to provide services to libraries. It is the author's hope that the Library Board, the Trustees, the Partners, and the College will consider the arguments presented in this evaluation in making their final decision regarding replacing the current ILS system with Koha.

Small Academic Library: Background

This evaluation of the Koha ILS is intended for a small academic library with the following characteristics:

- **Mission:** to support academic programs of a small private liberal arts college and to serve the instructional research and information needs of the campus community
- **Main user groups:** students (total student population: under 3,000), faculty and staff (total: under 300), and visiting scholars (total number varies each year)
- **Collection.** The Library collection is three-fold. It includes: (1) a moderate-size physical collection (under 100,000 volumes) including a high proportion of archival and special collections materials, (2) approximately 200 serial titles, including magazines and journals, and (3) a significant number of digitized and "born digital materials." In addition, the Library subscribes to multiple electronic journals that are available in full text. The print collection is organized by Library of Congress classification system, with an "open stack" arrangement, allowing free access to most materials. The archival and special collection materials are housed in a designated area, available by appointment with the special collections librarian.

- **Library services.** To fulfil its mission, the Library acquires, organizes, and provides access to the library resources and collections, as well as to the information located elsewhere through traditional reference services and through the use of new and evolving technology. The Library borrows approximately 4,000 items from other libraries annually and loans on average 1,200 items to other libraries, through the interlibrary loan service (ILL).
- **Library automation.** The Library currently runs on a proprietary integrated library system from the on-site server. The system includes OPAC/Public Catalog, multiple subject-specific and interdisciplinary databases that offer indexes, abstracts, and full-text/image documents, and document delivery services (ILL).
- **User needs.** The students and visiting scholars use library services to search the OPAC and databases, place holds, borrow materials from the Library and via the Inter-Library Loan, and access full text in electronic journals and other digital resources. The faculty members also use the Library for instruction and placing course materials on reserve.
- **Library staff.** There are five professional librarians and two support staff within the Library.
- **Library funding.** During the past few years, the Library sustained several budget cuts resulting in reduction of staff resources and services. The Library spends approximately \$12,000 annually on physical books and electronic resources. It is currently seeking additional funding opportunities for collection building and maintenance.
- **Consortium membership.** The Library has access to other collections, of all library types in the region through the local library consortium. As a participating member of the

Online Computer Library Center (OCLC) network, the Library has access to millions of bibliographic records nationally and internationally.

Rationale for change

Switching from the current library ILS to Koha is recommended within the context of the main Library characteristics described above. It is aimed at achieving a balance between the main decision-driving factors: saving ILS costs while ensuring the current functionality, and meeting the library and user needs.

“Although resources for small college libraries pale in comparison to those at research university libraries, many of the same services are expected by faculty and students,” Doherty and Piper aptly point out. “Hours of operation, circulation and interlibrary lending services, reference consultations, and other activities are essential offerings at small and large academic libraries alike” (2015, p. 161). Furthermore, small academic libraries are now expected to join some of the more recent large research libraries’ initiatives and services, including data curation, institutional repository services, next-generation catalogs, interoperability with library consortia, and other technology-driven advancements.

The growth of digital resources in the last decade has shifted the library’s focus from providing labor intensive services to facilitating access to capital intensive information. “While libraries have seen labor-intensive activities such as book acquisition and processing decrease, capital investment in electronic information and technology-based services has increased significantly. The transition from brick-and-mortar book repositories to virtual services and collaborative spaces is most challenging to small libraries,” Doherty and Piper argue (2015, pp. 164-165).

In order to overcome the transition challenge, accommodate the shifting scope of the liberal arts college library collection, from print materials to electronic resources, cope with the budget shortages, and meet the technology-driven library and user needs, it is advisable that the Library considers replacing its current, proprietary ILS, with an open-source library management system.

ILS selection criteria

From the combination of limited funding and the essential needs of the Library and the users, the following priorities and ILS specifications were derived:

- Economical – preferably free, open source ILS
- Accommodates existing library software and hardware; can be operated on the on-site server
- Delivers functionality for core library services: acquisitions, circulation, cataloging, serials (print and electronic) management, authorities, system administration, and course reserves.
- Provides federated search functionality and the ILL module
- Can handle the library's growing collection of electronic resources, i.e. offers the ERM module for e-books and rights management
- Provides flexibility to pursue third-party products, such as knowledge base, link resolver, and discovery layer
- Supports consortia interoperability, i.e. cataloging works with OCLC Connexion, etc.
- Provides strong long-term vendor support during the ILS software installation, configuration, staff training, use, and maintenance.

Koha: ILS Vendor Overview

Originally developed in 1999 for the Horowhenua Library Trust (HLT)—a three-branch library system in New Zealand—Koha is the world’s first free and open-source integrated library system. “Koha, in the Maori language of the indigenous population in New Zealand, means “gift.” By making the software freely available, HLT saw this contribution as its Koha to libraries around the world,” Breeding explains (2014, *The History and Background of Koha*). Since its inception, Koha has been using other open source components: MySQL, for its relational database management system; Perl, for programming its business logic and interfaces; the Linux operating system, and the Apache web server, according to Breeding (ibid.). Koha software is licensed under the Free Software General Public License (GPL) version 3 or later¹.

At the time of this writing, 2,491 public, academic, and special libraries were using Koha across the globe (Breeding, 2015). Koha users range from small special libraries to large multi-type consortia “ranging from 7 to 75 member groups, such as the Massachusetts Library System and the first public library to adopt Koha in the United States, The Athens County Libraries,” ByWater Solutions reports².

Vendor contact information

- Official website: <http://koha-community.org/>
- Company providing support services for Koha and related open-source software in the United States:

ByWater Solutions

106 Topstone Rd.

Redding, CT 06896

Phone: 888-900-8944

Website: bywatersolutions.com

Types of libraries served: public, academic, school, special

- Free installation of Koha ILS software package: <http://koha-community.org/download-koha/>

¹ <http://www.gnu.org/licenses/gpl.html>

² <http://bywatersolutions.com/about-us/partners/>

- Koha User Guide:
<https://docs.google.com/document/d/140PHdvMARxucKg6yCbfUqlhwoWb4vHc3nC5yzjFpgy0/preview?pli=1>

Available modules

Koha is a full-featured ILS with comprehensive functionality including basic and advanced library management options. Koha offers:

- Modules for acquisitions, circulation, cataloging, serials management, course reserves, and system administration
- Authorities, flexible reports, barcode printing, and multi-format (Email and SMS) overdue notices
- Off-line circulation for when Internet access is not available
- System: Unlimited SIP2 connections, LDAP functionality, MySQL database, works with RFID (radio frequency identification) and self-check-out products (ByWater Solutions, 2015, *Koha Features Overview*).

Compliance with library standards

Koha is built using library standards and protocols such as MARC 21, UNIMARC, z39.50, SRU/SW, SIP2, SIP/NCIP, ensuring interoperability between Koha and other systems and technologies, while supporting existing workflows and tools (*Koha: About*). The cataloging module, in particular, includes support for MARC records and Z39.50 for the transfer of records from cataloging utilities.

Next-generation offerings

“While Koha does not offer drastic changes to workflow compared to next generation Library Services Platforms, it still provides core functionality that meets our staff needs,” The Switch Library Consortium reports (2014, p. 12). The next-generation features that Koha does

provide include most up-to-date standards-compliant web-based interfaces; full-text searching and enhanced catalog display; personalized patron experience; Web 2.0 features (tagging, commenting, and star ratings in OPAC; social network share buttons); and multilingual support—among others (*Koha: About*; ByWater Solutions, 2015, *Koha Features Overview*).

Web-based interfaces. Koha ILS is web-based, so it is platform independent. Koha's OPAC, circulation, records management, and self-checkout interfaces are all based on most up-to-date standards-compliant World Wide Web technologies—XHTML, CSS and JavaScript—making Koha a truly platform-independent solution.

Full-text searching and enhanced catalog display. Koha offers powerful searching, and an enhanced catalogue display that can use content from Amazon, Google, LibraryThing, Open Library, Baker & Taylor, Novelist Select, iDreamBooks, and Syndetics, among others. Virtual shelf browser is also provided.

Personalized patron experience. The personalized features include ability to place, suspend, and cancel holds; list current and past checkouts; view account history (fines and payments); register for a library card online; access account information; and many more.

Web 2.0 features. Koha provides Web 2.0 features in the OPAC, such as tagging, commenting, and star ratings, as well as Rich Site Summary (RSS) feeds.

Social network share buttons. The social sharing functionality is provided as an added value for library users, so they can share their search results within their social network.

Multilingual support. Koha has a large number of available languages, with more languages added every year. This feature ensures that libraries using Koha meet the user needs of the library's multicultural audience, in particular those related to the foreign-language students, scholarship and research.

Customization

Koha is fully open to third-party service integration, such as RFID, Ebrary, Payment Gateway, and other services that any library may need to ingrate in addition to what's included in the Koha installation package.

The openness of the sources code allows full customization of the ILS functionality. Koha provides OPAC customization tutorials³, demonstrating how to apply the custom CSS and JavaScript, customize the display of online resources like e-Books and electronic resource detail page, add functionality allowing limiting the number of checkouts for certain item types, and many other OPAC features.

Interaction with consortial partners

Several successful consortial Koha implementations have been reported as early as in 2008, including the Massachusetts Library System, several regional library systems in Kansas, and the Indiana Shared Catalog. "In addition to consortial implementations, many Koha implementations support single library organizations, many including multiple branches or facilities," according to Breeding (2008).

Pricing

Koha is the least expensive of the ILS products, both to implement and to maintain. Being open source, there are no licensing fees. Libraries operating on Koha spend their budgets only on system support and future service improvements. Yang, Hofmann, and Weeks report the following pricing, for the libraries with collections ranging between 50,000 and 100,000 (2009):

- Initial ILS cost (software, installation, configuration, migration of data, documentation, training): \$19,250
- Initial labor: \$9,167
- Annual ILS cost (support contract, maintenance): \$2,550

³ <http://www.myaopl.org/koha/category/koha/customizations/>

Available support

Vendor support. ByWater Solutions currently supports over 1,000 individual library sites using Koha ILS in the United States. The support package includes technical consulting, training, network configuration, OPAC customization, report generation, bug fixing, management of community or customer-sponsored enhancements, 24/7 monitoring of library-hosted servers, and regular updates to Koha system as new functionalities become available (usually every 4-6 months) (ByWater Solutions, 2015, *Expert Anytime Koha Support*).

No Vendor Lock-in. It is an important part of the free software promise that there is no vendor lock-in: libraries can install and use Koha themselves if they have the in-house expertise. Alternatively, they can purchase support or development services from several available sources. Libraries using Koha are free to change support company and export their data at any time (*Koha: About*).

Final recommendation

The above evaluation data indicate that Koha is a strong candidate for replacing the library's current, proprietary ILS. Koha fits well with the library priorities, as outlined in the ILS Selection Criteria section above. Additional customization will be acquired from third-party vendors for the modules/functionalities that Koha currently does not provide: the ERM module, to meet the needs of the digital collections, the ILL module for inter-library loan services, and the federated search functionality. The customization options are provided in the respective section below (*Flexibility to pursue third-party products*).

Economical ILS that delivers core functionality

The least expensive of the ILS products, Koha provides the functionality that meets the needs of the core library services: acquisitions, circulation, cataloging, serials management,

course reserves, authorities, patron records management, flexible reporting, barcode label printing, OPAC, and administration, including electronic ordering and invoicing.

Accommodates existing library software and hardware

Koha is platform-independent and can be operated on the library's on-site server. Koha's compliance with library standards ensures interoperability between Koha and local library systems and technologies, while supporting existing workflows and tools.

Administrative functionality

Koha provides full access to administrative functions, offering over 400 system preferences to make Koha run just the way we want. In addition, it allows creating custom pull-down menus for use in cataloging, patron management, and invoicing. Finally, it gives complete access to all data stored on Koha, allowing writing various types of reports, as well as searching reports for easy access.

Flexibility to pursue third-party products

The full customization will allow the Library to integrate the features and modules that are not included in the Koha software package from third-party vendors.

The ERM module (e-books, rights management, and knowledge base), designed to manage acquisition, licensing and access to subscription based on purchased electronic resources, can be acquired from a free, open source ERM system, called CORAL⁴. ByWater Solutions announced this August that the ebook integration is expected with the next update. "Libraries will be able to access all of their content from OverDrive, Axis 360, Recorded Books, and Freading in Koha so patrons can check out books without leaving the system," the company representative said (Scardilli, 2015).

⁴ <http://coral-erm.org/>

The Inter-Library Loan (ILL) module and federated search functionality have been in development at Koha since 2014. The ILL module provides the skeleton and infrastructure for ILL functionality, and has been tested by a small number of libraries⁵. “Other current projects at ByWater include an advanced cataloging module and enhancements to Koha’s federated search capabilities,” Enis reports (2014).

In the meantime, the library will acquire the ILL module and the federated search system from a third-party vendor, in order to ensure continuity of the ILL service in the library.

Consortia interoperability

Koha can be set to work with the OCLC Connexion Gateway. This allows libraries to use OCLC Connexion as their cataloging tool and simply send those records to Koha with a single click⁶.

Vendor support

ByWater Solutions provides support at all stages of Koha implementation and maintenance. The customer testimonials speak directly to that. “We have been very pleased with our new Koha ILS, and with the support we have gotten from ByWater. They were extremely helpful with our migration and customization, and worked with us every step of the way. And since we have gone live with Koha, the responsiveness of the ByWater support team has been just great,” Nissa Flanagan, Systems and Technical Services Manager at Merrill Memorial Library in Yarmouth, ME, said. “And of course, the Koha ILS is web-based, so it is platform independent, and it is extremely feature rich and customizable, offering many features that some well-known proprietary products don’t even have. We are very happy that we made the move

⁵ http://wiki.koha-community.org/wiki/ILL_Module#Interlibrary_Loans_Module

⁶ <http://manual.koha-community.org/3.12/en/oclcappendix.html>

from our old proprietary ILS to Koha, and that we went with ByWater Solutions for our technical support” (ByWater Solutions, 2015, *Koha and ByWater Solutions Testimonials*).

Conclusion

Implementation of Koha ILS in our library will address all three factors at the core of the ILS replacement decision: it will generate cost savings and help relieve the financial burden of maintaining the proprietary ILS subscription; it will provide the core functionality for all library operations; and it will allow the library to provide high-quality services to its main user groups: faculty, students, and visiting scholars. The Library will be able to take advantage of the budget savings it will have generated from Koha implementation to extend hours of operation, augment its collection by acquiring new materials and electronic journal subscriptions. Selecting Koha as our next ILS will help the Library plan for future organizational projects where integration with other, third-party products is better ensured and make decisions on other software/hardware with confidence.

Our patrons will benefit from not only the additional services that Koha brings to the table, but from the next-generation features it offers, such as enhanced catalog display, personalized patron experience, tagging, commenting, rating, multilingual support, and social network functionality, as well. As our new ILS, Koha will bring about a positive change to patrons, the Library, and the College as a whole. Ultimately, Koha implementation will help the library most quickly, efficiently, and cost-effectively solve the patrons’ need for access. In this way, the Library will not only fulfil its mission in supporting academic programs, the instructional research, and information needs of the campus community, it will truly empower the students and faculty to engage in the 21-st century research and learning.

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