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What You Need to Know

Academic libraries have always played an integral part in higher education’s development, and college and university libraries continue to transform themselves to meet the strategic goals of their institutions. Technology both stimulates and supports this change. Students and faculty increasingly rely on technology to complete their studies and research; academic libraries continue to invest in technology to meet their needs. Today’s academic library still houses a traditional book collection but also provides a growing range of resources such as electronic information and database resources, high-speed Internet access and Wi-Fi, computing devices, and multimedia resources.

Almost all institutions (99%) reported having a library IT system. Of the 20 core systems in the Core Data Service survey, library systems are the applications for which central IT is least likely to have primary responsibility (19% of institutions). Relative to other core systems, library systems are not highly customized and not likely to be managed in-house (figure 1).

*Rate of change is an indicator of how rapidly a system area is changing. It is a composite score based on year of current implementation and on plans to implement new systems or replace existing ones. Systems with the highest rate of change typically have been implemented recently or are expected to be implemented or replaced soon.

Figure 1. Characteristics of core information systems
For U.S. institutions, library systems are tied with several other core systems for fifth oldest, with an average year of implementation of 2003. At least 12% of institutions are planning to replace these systems in the next three years. However, possibly because central IT frequently does not have primary responsibility for the library system, a relatively high percentage (31%) of institutions responded that replacement plans for this system are unknown (figure 2).

Figure 2. System provision and plans for change for library systems
Market Share

With nearly 9 in 10 institutions (86%) using a solution from one of the top 4 vendors—Innovative Interfaces, 35%; Ex Libris, 34%; SirsiDynix, 9%; and OCLC, 8%—the library system market is fairly homogeneous (figure 3). That homogeneity is balanced by a variety of solutions, however—each vendor provides at least two different solutions.

Figure 3. 2014 library system market
Market Shift: 2011–14

From 2011 to 2014, OCLC has had the greatest relative change in market share, quadrupling the percentage of institutions using their solutions (from 2% to 8%) since releasing its cloud-sourced, vendor-neutral WorldShare product in 2011. Innovative Interfaces has increased its market share from 30% to 35% (figure 4).

Figure 4. 2011–14 library system market (top 4 vendors and homegrown)
Management Strategy

With a quarter of the market (24%) using a SaaS solution, library systems are the fourth most likely of the core systems to be provided through this management strategy, behind student e-mail (54%), learning management systems (31%), and faculty and staff e-mail (29%). Of the top 6 solutions (listed in order of market share in figure 5), OCLC WorldShare Management Services is most likely to have a SaaS implementation (68%).

Figure 5. Management strategies in use for top 6 library solutions
Deployment Strategy

IT organizations are thinking about the growing need for mobile access to core systems, and library applications are no exception. The most common approach is responsive web design, with about one-quarter of institutions (27%) using it. A mobile app is the least likely approach, used by only 8% of institutions, but is much more likely for institutions using OCLC WorldShare (figure 6).

Figure 6. Deployment strategies in use for top 6 library solutions
Case Study: Carthage College Implements WorldShare

Carthage College exemplifies the academic library’s transformation. According to Todd Kelley, vice president for Library and Information Services (LIS) and chief information officer, Carthage College’s Hedberg Library possessed 300,000 objects in 2009, 75% of which were locally housed, hard-copy resources, while the remaining 25% were electronic resources stored in the cloud. During the five years that followed, the institution doubled its catalogue of available objects to 600,000. Because most of the new resources are e-books, e-journals, and on-demand online videos, the proportions of hard-copy and electronic resources have switched, with digital resources now accounting for three-quarters of the library’s collection.

When planning future library investments to meet tomorrow’s patrons’ needs, library directors and IT leaders must be cognizant of trends and changing requirements. For example, as more hard-copy information resources moved to the cloud, Carthage College’s LIS area decided several years ago to replace its locally hosted, highly featured library system with a cloud-based solution. After trial and error with another solution, Carthage adopted OCLC’s WorldShare Management Services library system three years ago.

Primary selection criteria included an easy-to-use interface and integration with other systems, given that LIS wanted to minimize information silos and system interfaces, as well as maximize resource login seamlessness. WorldShare met these requirements by offering an integrated application suite to manage the Hedberg Library’s acquisition, cataloging, and circulation functions. Prior to its WorldShare implementation, LIS built an ever-expanding web page of access and usage instructions for all of its electronic databases and digital resources. Now, with WorldShare, library patrons mainly navigate one interface to search and access electronic resources. In addition, the system integrates with interlibrary services and expedites requests with its one-click request button and automatic population of patrons’ information. WorldShare’s reporting function enables Kelley and his team to track library activities and assists in their planning. Finally, LIS liked OCLC’s library community orientation—its nonprofit status and its collegial development of WorldShare from input from libraries all around the world.

Mobility was an additional purchase consideration in that LIS believes mobile access will become an increasingly important library service feature for students. Currently, Carthage students bring an average of 4.5 network-accessible devices
to the college; tomorrow’s students—today’s 14- to 18-year-olds—will likely be even more tethered to their computing devices. WorldShare gives Hedberg Library a foothold in mobile library services—e.g., on-the-fly information look-up and retrieval. Because it is cloud-based, WorldShare works consistently from a variety of devices and locations. OCLC has paid a lot of attention to developing the user interface and search algorithms so that students can easily search for resources and interpret the results they get.

The WorldShare implementation impacts the Hedberg Library in significant ways. Most notably, electronic resource usage climbed dramatically. For example, in 2014, the Hedberg Library experienced an approximately 13% year-to-year usage increase in electronic resource usage, its first double-digit increase ever. And the switch to a cloud-based system enabled LIS to refocus some of its library system staff hours on academic support—to instruct/assist students directly with their studies; to maintain Ask Albert, the LIS FAQ/knowledgebase; and to help faculty educate their students about library resources.

Overall, Kelley is pleased with the cloud-based library system transition. He explained, “Our cloud-based library system implementation is singularly the most successful service that we provide on campus in terms of effectiveness and efficiency. In terms of ROI, it is second only to our cloud-based e-mail transition, only because Google Apps was free.”
Conclusion

Partnership between IT and libraries is critical. Library systems are the core system for which central IT is least likely to have primary responsibility. As a result, central IT may not have as much visibility or influence on the implementation of these systems. As libraries work to meet the strategic institutional goals, they need to become technology infused. The library system is not a new application, but there are new opportunities arising to integrate and embrace the openness of resources that is so prevalent in academic discussions.

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Notes

1. Vendor-hosted options include infrastructure as a service (IaaS), platform as a service (PaaS), and software as a service (SaaS).


About the Enterprise Application Market Series

The Enterprise Application Market report series from the EDUCAUSE Center for Analysis and Research focuses on data from the EDUCAUSE Core Data Service (CDS) to better understand how higher education institutions approach various information systems. Market share and system rate of change are among the metrics highlighted in this series. Information provided for this series was derived from Module 8 of CDS, which asked several questions regarding information systems and applications. For reports in the 2014 series, responses from 560 institutions were analyzed. Only U.S. institutions are represented in this series.