



GEORGIA PINES
INTEGRATED LIBRARY
SYSTEM (ILS) EVALUATION
PROJECT

APRIL 23, 2018

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PROJECT SUMMARY/DESCRIPTION

As part of an overall strategic planning process, Georgia PINES contracted with Quipu Group to perform an evaluation of the Integrated Library System (ILS) options currently available. The ILS Evaluation Project was led by Melissa Stockton and Carol Gyger from Quipu Group.

This project was designed to meet the following goals:

- Identify the key automation needs for PINES library systems that will facilitate efficient and accurate workflow and results.
- Evaluate ILS products and providers to identify the key differentiating qualifications and seek information about how they handle critical workflows.
- Provide analysis of PINES automation requirements and make a recommendation that will provide for future growth of the PINES consortium.

The project was broken down into 5 phases.

Phase of Project
1. Project Launch
2. Investigation of Current Automation Landscape
3. Creation of ILS Evaluation Tool
4. ILS Vendor and Service Provider Evaluation
5. Development of Recommendations and Final Report

The ILS Evaluation Project began with a Project Launch to finalize the project plan, schedule and key stakeholders. The second phase, Investigation of Current Automation Landscape, involved a Needs Assessment process which included on-site meetings between the Consultants and the PINES staff. The meetings were split out into functional areas of the ILS, including Acquisitions, Cataloging, Circulation, ILS System Administration, IT/Systems, Interlibrary Loan/Outreach, Reports, Serials and Third-Party Integrations. During these meetings detailed lists of features and functionality were discussed with the subject experts to determine which features are used by PINES libraries and the priority of the different features. The discussions also allowed the Consultants to hear about how these features are implemented in Evergreen, the current ILS utilized by PINES as well as to prepare the evaluation document for potential vendors.

The information gathered during Phase 2 was used to develop the PINES ILS Evaluation Project Survey. The survey form is included with this report as Attachment A (separate file). The survey was sent to potential vendors and the responses were reviewed and summarized by the Consultants. The Summary document is included with this report as Attachment B (separate file). This report represents the final phase of the project which incorporates information gathered through the first 4 phases.

VENDOR PROFILES

Three vendors were identified as having ILS solutions which could handle the size and transaction requirements for a group as large as Georgia PINES. The vendors include:

- Innovative Interfaces (Polaris ILS)
- The Library Corporation (TLC) (CARL.X ILS)
- SirsiDynix (Symphony/BLUEcloud ILS)

The ILS Evaluation Survey which was developed following the Needs Assessment was sent to each vendor for a response. The full responses from the vendor are included with this report as separate files:

- Attachment C – Innovative Interfaces
- Attachment D – The Library Corporation
- Attachment E -- SirsiDynix

There are two systems which were not included in the Evaluation for this project which will be discussed briefly in this section. These systems include:

- FOLIO – an open source system
- OCLC – Wise

INNOVATIVE/POLARIS

The Polaris system was built for public libraries and was developed with a structure that works well for consortia. The system was built on Microsoft technologies which make the PC clients very intuitive for those familiar with MS Windows. Polaris has a web-based client for Circulation which has all of the functionality needed for circulation desk activities. Polaris has a "Find Tool" which is available in all of the staff interfaces. This Tool provides staff with a very powerful methods for finding any record in the system, including patron records, acquisitions orders, bibliographic and item records. The tool is simple to use but also offers an SQL search for those with higher level technical skills. The Find Tool allows you to place selected records into a record set which allows staff to update or manipulate the records in a variety of ways. The Polaris PowerPAC is the only public interface provided for the Polaris system. Instead of creating a separate discovery layer for the system, Polaris has been updating and upgrading their PowerPAC module. The responsive design of PowerPAC provides the same interface for desktop, tablet and smartphone users.

ACQUISITIONS

The Polaris Acquisitions features allow each library to have separate vendors and funds and provides support for EDI functionality with a large number of vendors. Polaris has developed a method for libraries to automatically download bibliographic records for titles purchased from Bibliotheca's Cloud

Library, Baker & Taylor's Axis 360 and OverDrive. The Find Tool, along with the canned reports and the other reporting tools available through Polaris provide a high level of reporting capability.

CATALOGING

Polaris offers batch loading of bibliographic, item and authority records. Profiles are created to determine the rules related to specific tag data, duplicates and item creation to be used with each load. Interfaces with OCLC are available for individual and batch loading of records. An integrated label manager facilitates the customization and creation of spine labels for each library. Polaris clients work with BackStage and other vendors for authority control and there is also a weekly authority service available through Innovative. Record sets can be created using the Find Tool to manipulate records following a batch load, if necessary.

Polaris has partnered with Zepheira for providing linked data services to libraries. They have a service which can export records from the Polaris system and transform them to Linked Data vocabularies including BIBFRAME and schema.org for use by Zepheira.

CIRCULATION

Since the Polaris structure was created with a hierarchy of System, Library and Branch, many parameters and settings are available at each level, providing a great deal of global control and local autonomy for circulation rules. A large number of the fields in the patron record are available for searching, with the Find Tool providing even more flexibility.

Polaris has a "group hold" feature which is very handy when dealing with book clubs or other groups. The holds routing capabilities in the system are very sophisticated and can be configured to match regional or delivery route types of routing schemes. A wide variety of customizable notices are available for circulation transactions and can be sent via print, telephone, emails and text.

Some inventory functionality can be performed within the basic Circulation system and an available add-on, Polaris Inventory Manager, provides further inventory capabilities as well as the hardware to perform inventory functions.

OUTREACH AND INTERLIBRARY LOAN

Polaris has functionality which allows users to request items through the public interface that can then be managed through the ILL process using the Request Manager functionality. Requests can be mediated or automatically sent to OCLC.

Profiles for Outreach patrons (or groups) are utilized for the creation of selections lists of items which could be pulled for the patron. Reading preferences can be entered into the profile and patron ratings for items checked out can be used to help refine the selection lists for that patron. Packing slips can be created for mailing materials.

PUBLIC INTERFACE

PowerPAC is the public interface for Polaris and utilizes responsive design so that it can be used by patrons using computers, tablets and smartphones. Polaris utilizes MS SQL for the underlying database and indexing/searching features. Polaris has a deep integration for ebooks, however, their integration with other eResources is not as robust.

REPORTS

Polaris provides many different levels and types of reporting. As mentioned above, the Find Tool allows library staff a wide variety of methods for finding records of all types in the system. SimplyReports is an interface which provides staff with the ability to select criteria and run reports on all aspects of the system without requiring a high level of technical expertise. Polaris utilizes an MS SQL database and reports can be created using Microsoft Reporting Tools or a variety of other third-party products.

SERIALS

Although important, PINES does not require a great deal in the area of Serials. The Serials functionality in Polaris supports all of the features required by PINES libraries for paper subscriptions, providing individual control of check-in as well as differentiating the display of holdings in the public interface.

IT AND SYSTEM ADMINISTRATION

Polaris is run on Microsoft servers and utilizes the MS SQL database. The System Administration functionality in Polaris takes advantage of the basic Windows features which make it very easy to use. The number of interfaces required to administer the system is limited, again, making it simpler for the systems staff to manage.

3rd PARTY INTERFACES

Polaris has a reputation for working well with third-party vendor solutions. They have developed a very thorough API (application programming interface) which can be utilized to access the majority of functions available in the system from the outside. Polaris libraries have been able to utilize services from a wide range of vendors for circulation, public interface, acquisitions and other collection services. One thing to note in this area is that Innovative does not charge for SIP connections which only provide authentication. If using a proprietary ILS, this pricing model would be a great cost savings for a group like PINES compared to other options.

TLC/CARL.X

The Library Corporation stands out in the library marketplace as one of the few companies that is still privately owned, with ownership being stable since 1974. The CARL.X system was created using the Oracle platform which allows the system to support some of the largest libraries around the world. Web-based clients have been developed for Circulation, Collections (Cataloging, Acquisitions, and

Serials), and Reports which provide a select set of functionalities for each area. Reporting capabilities which provide integration with Excel offers a very powerful and custom method for reporting on all aspects of the ILS.

CARL.X often offers new features before other vendors have them available. They currently have a Digital Library Card which can be implemented and are already developing voice recognition capabilities throughout the system.

ACQUISITIONS

The CARL.X system offers a fully functional Acquisitions module which allows libraries to maintain separate vendor and fund information. Optionally, libraries which share the system can also share some acquisitions features such as Receiving Profiles and Selection Lists. CARL.X offers the product Online Selection & Acquisitions (OSA), a direct portal to the databases of leading vendors including Baker & Taylor, Brodart, BWI, Ingram, Midwest Tape, and Perma-Bound which can be used to automate the selection and ordering process. EDI can also be utilized within the CARL.X system.

CATALOGING

CARL.X provides batch loading capabilities for records from OCLC or other sources. Bibliographic, Item and authority records can be loaded using rule sets customized for each source. Current clients utilize the services of BackStage for authority record maintenance. The cataloging client also provides a method for staff to link disparate records together to gather all formats of a title together in search results.

CARL.X currently has processes in place for working with Zepheira for linked data but are also updating their cataloging and discovery interfaces to work with BIBFRAME. This development will eventually allow similar discovery capabilities through the local catalog.

CIRCULATION

CARL.X has several options available for setting up a consortium in the system. The configuration selected provides different levels of customization at the group and library levels. All fields of the patron record are available for searching, with Boolean and wildcard searching options assessable by staff. One interesting feature is the "Big Red Box." A large red box is displayed to the staff when certain errors are encountered, including when a blocked patron record is retrieved.

Receipts and notices can be customized at the library level, with receipt customization available down to the workstation level. The system offers many different types of notices that can be automatically generated and sent, including Account Expiration, "Coming Due" (Courtesy) Notices, Overdue, Fine Postings, Lost Item billing, End of Claim Cycle, Hold Availability, Hold Cancellation, and patron "Balance Due" notice.

CARL.X is incorporating a 'FRBRized' view of the catalog – by offering a single entry for particular intellectual content, and grouping formats and editions with that record, based on foundational data already present in the CARL•X System for creating connections between discrete MARC records based on intellectual content. They are now working on utilizing this new functionality to give staff more

flexible options when placing holds. A branch grouping feature is utilized to determine the appropriate routing for holds.

CARL.X can be integrated with several third-party inventory products and also offers a native inventory capability.

OUTREACH AND INTERLIBRARY LOAN

CARL.X can interface with OCLC and Illiad systems as well as other types of resource sharing systems such as URSA and INNREACH.

Outreach options feature patron delivery profiles, carrier and volunteer logging, charge history, saved searches, patron wishlist, pre-checkout notification of a potential repeat title as well as automatic and manual bibliographic record linking (along with linking reports) using an intellectual identifier to assist staff in providing services to these patrons.

PATRON INTERFACE

CARL.Connect Discovery is the main patron interface for CARL.X and utilizes a responsive design for use by any platform. An app is also available for the patron interface for both iOS and Android. Indexing utilizes Lucene, an open source search engine library. Search results can include information from RSS feeds and news organizations as well as select eresources such as EBSCO and Gale. This discovery layer also provides full integration for ebooks from Overdrive and Baker & Taylor's Axis 360. The ability to group separate bibliographic records to display all formats of a title together and the use of geolocation in the mobile apps are two special features.

CARL.X offers what is probably the best Children's Catalog (CARL•Connect Discovery Kids) option on the market. The Children's Catalog is included in the core system for every client and is backed up by research and support from TLC.

REPORTS

CARL.X has a large number of canned reports as well as methods for customizing those reports for local requirements. The Adhoc Report tool provides access to almost any piece of data and can be utilized with either Crystal Reports or Excel. Excel templates are provided that can be used by those with minimal knowledge of Excel and greatly customized by those with a higher level knowledge of Excel.

SERIALS

For electronic serials, CARL.X works with the Colorado Alliance and their Gold Rush ERM. This tool can be used to keep track of subscription, contract and holdings information for separate online serials as well as those residing in larger databases or collections. eMedia records can be created and stored in the ILS and included in the search results for the public. The Serials functionality in CARL.X supports all of the features required by PINES libraries for paper subscriptions, providing individual control of check-in as well as differentiating the display of holdings in the public interface.

IT AND SYSTEM ADMINISTRATION

TLC uses Oracle (CARL•X ILS database) and Postgres (CARL•Connect Discovery) databases. There is an Administrative Client which can be used to update the majority of parameters and settings within the system. Other interfaces allow system administrators to manage the discovery interfaces and reports.

3rd PARTY INTERFACES

CARL.X offers several APIs which cover the different areas of the system, including Catalog, Patron, Circulation, Administrative and Data Synchronization. Costs for SIP connections are fairly pricy and PINES would want to negotiate in this area in order to afford the number of SIP connections required for this size of group. Although CARL.X does not currently connect to as many third-party systems as the other two vendors, their SIP and API implementations are very solid and the company has a good reputation for working closely with their clients to ensure new connections work properly.

SIRSIDYNIX/SYMPHONY AND BLUECLOUD SUITE

SirsiDynix has a larger number of clients than any other ILS vendor. The Symphony system can be run on an Oracle or an MS SQL Server. The company currently offers the Symphony ILS to new clients. SirsiDynix is also developing a newer and more modular option which is called the BLUEcloud Suite. The products available in the BLUEcloud Suite are offered in conjunction with Symphony. As each new BLUEcloud product is developed, Symphony users have the option of moving specific functionality to the new interfaces or continuing to use the Symphony ILS alone. The BLUEcloud Suite offers web-based interfaces and often introduces very exciting, new and sophisticated functionality. There are also Symphony web clients available for some areas, however, the BLUEcloud Suite may offer more features, especially as development continues.

ACQUISITIONS

The Symphony staff client provides the ability to search vendor sites and place orders through the Vendor Information Portal. Bibliographic records can be automatically brought into the catalog from the vendor websites and selectively made available through the public interfaces. eResource Central, part of the BLUEcloud Suite, allows library staff to browse and select titles from eresource vendors as well as the ability to manage vendor accounts, harvests data, specify access parameters and gather analytics of usage. Current develop includes the addition of functionality to support patron driven acquisitions. Symphony supports EDI activity for a wide range of vendors.

CATALOGING

Symphony offers the ability to add records one-by-one from a variety of sources, including OCLC. Symphony can update library holdings in OCLC when a record is selected for loading into the local catalog. Sophisticated loading rules can be created for records being loaded as a batch, with the system allowing MARC and non-MARC records to be added to the database. An integrated "Label Designer" is available for customizing labels by library and/or material type. SirsiDynix offers their own

authority control services, however, records from third-party vendors such as BackStage can be managed through customizable batch record loaders.

SirsiDynix offers other products which can be used to manage electronic resources. eResource Central (eRC), part of the BLUEcloud Suite, and CORAL, an open source electronic resource management tool are both integrated to help manage bibliographic records and metadata for ebooks, eaudio, electronic serials, etc. Information managed in eRC and CORAL are made available through the public interfaces.

BLUEcloud Visibility is product developed for linked data and exposing library information to search engines.

CIRCULATION

The structure of the Symphony ILS allows groups to share the system while maintaining local autonomy in parameters and settings. Although limited, the fields from the patron record that are made available for searching are more than adequate.

The "Blanket Holds" feature allows staff to place holds over a range of bibliographic records. For example, any book by a particular author or any items on a specific subject. The user can decide how long to keep the blanket hold in place and how many items will satisfy the hold. As an example, three books by Charlaine Harris before August 10, 2018. Symphony also offers fairly sophisticated methods for determining which holds should be used to fill hold requests and the routing priorities are set by library.

Symphony has an integrated inventory "wizard" as well as mobile and user-friendly full inventory capabilities in BLUEcloud MobileCirc.

OUTREACH AND INTERLIBRARY LOAN

Symphony utilizes "Interlibrary loan wizards" to facilitate sending requests and receiving replies from OCLC. Items sent and received through ILL flow through the system like other items which reside in the system.

Outreach capabilities in Symphony include patron profiles detailing desired formats, frequency and subjects. The system also supports the creation of selection lists and packing slip creation for delivery.

PUBLIC INTERFACE

Enterprise is the discovery interface for Symphony. Lucene Solr™ is used for full-text indexing. There are several mobile options available, including Enterprise "Mobile Pages", BookMyne & BLUEcloud Mobile (iOS and Android). One standout feature in Enterprise is the ability to create any facet you would like, as long as you have the data to back it up.

Patrons can search electronic databases, other libraries, PDF collections, and any number of other library-defined targets through Enterprise. Options for integrating the EDS searching mechanisms for other resources such as EBSCO and Gale offer users results in one unified interface. eResource Central provides the ability to integrate a large number of ebook resources into the public interface while also

providing a staff management interface. ebook integrations include Hoopla, Overdrive, 3m Cloud, Axis 360, Odilo, and many more.

REPORTS

Symphony offers 650 customizable report templates covering all aspects of the system. BLUEcloud Analytics is a web interface that is available which provides a user-friendly interface for running reports on data elements from across the system. The BLUEcloud Analytics interface allows users to select the criteria and output for each report and provides charts and graphs in addition to the numeric reports. BLUEcloud Analytics is still in development for some aspects such as acquisitions and serials.

SERIALS

The Serials functionality in Symphony supports all of the features required by PINES libraries for paper subscriptions, providing individual control of check-in as well as differentiating the display of holdings in the public interface. SirsiDynix has developed their BLUEcloud eRM which can be used for managing online serials, the product was developed based on the CORAL system which is an open source electronic resource management tool.

IT AND SYSTEM ADMINISTRATION

SirsiDynix is unique in offering the Symphony ILS using either an Oracle or Microsoft SQL Server database. For locally-installed systems, SirsiDynix software is available for a variety of server OS options including UNIX, Windows, and Linux. BLUEcloud Central is the product currently in development which will provide a single system administration portal.

3rd PARTY INTERFACES

SirsiDynix offers API's and "Web Services" options which provide access to almost all functions within the Symphony system from the outside. The sheer number of libraries utilizing the SirsiDynix software means that a very large number of third-party products have been interfaced or integrated with the ILS. An Unlimited SIP2 licensing option makes this area cost effective for large groups.

OTHER ILS PRODUCTS

There are open source and proprietary ILS solutions which are not included in this discussion. ExLibris offers a full suite of products which manage library and electronic resources for libraries, however, they are specific to academic libraries and not geared toward public libraries. The other open source ILS which has been developed, Koha, was not developed specifically for consortia as was Evergreen and although fully functional, does not offer as many consortia-related features.

FOLIO

FOLIO is a new open source option currently in development. The system is being developed with a modularity view, looking to allow libraries to select or develop different solutions for specific

functionality such as circulation. The idea is to be able to swap out the different layers of staff and public interfaces, all using the same core data. For more information, see <http://www.folio.org>.

The unique feature of the FOLIO development is the inclusion of a number of vendors which are contributing code to the project. The Kuali OLE system was developed by a group of libraries funded by the Andrew W Mellon Foundation. This group is now working with other libraries, library vendors and service providers to develop the FOLIO software. Vendors such as EBSCO, Index Data and SirsiDynix are all participants in the development of FOLIO.

FOLIO is a system which may be of interest to PINES in the future. The development efforts currently underway will be directed mainly towards the academic library market. There has been limited engagement up to this point with public library partners. Once the system is fully functional, they will need to have more public libraries involved to create the apps and features which more closely match the needs of this group. PINES may be in a position to be of great assistance in the future development of this system and would be a part of a large and inclusive group dedicated to the future of library management systems.

OCLC WISE

OCLC released WorldShare Management Services (WMS) several years ago as the first true cloud-based ILS option on the market. WMS was developed to utilize and integrate the extensive resources already available from OCLC with the traditional library management functions. This product has been embraced by small and medium sized academic libraries. In March of 2018, OCLC announced that it would be offering a new solution for public libraries called Wise. Wise is currently deployed in the Netherlands and is utilized by 75% of the public libraries in that country. OCLC is in the process of “Americanizing” Wise so that the terminologies and workflows available in the product match the needs of libraries in the United States.

OCLC indicates that Wise was developed from the patron side and that the staff functionality is all geared toward providing a better patron experience. The details are not yet available on the specific capabilities of this new system, however, it is something to keep an eye on as it is further refined and made available to libraries in the United States. Since PINES utilizes OCLC cataloging and Resource Sharing tools, Wise may become a tool that would be very beneficial to the group.

CURRENT ENVIRONMENT

In the library community, PINES is very much associated with open source and the Evergreen system. PINES has had an extremely large impact on the development of Evergreen as is evidenced by the large number of consortia-related options.

During the Needs Assessment Phase of this project, the Consultants reviewed many of the current features available in Evergreen. This section will make note of strengths and weaknesses that were identified.

ACQUISITIONS

The Needs Assessment meetings were held in December of 2017 and PINES was working with the first set of libraries to adopt and utilize the Acquisitions functionality in Evergreen. As more libraries use Acquisitions, there will be lots of testing and possibly some development work required to ensure EDI functionality for the majority of vendors utilized by PINES libraries.

The integration of selection lists or patron requests which allow users to enter requests and have those requests then automatically flow through the appropriate staff channels would be a useful addition to the current features. This type of functionality not only provides the patron with an easy way to request items not available but would also be an efficient way for libraries to process requests and maintain a high level of communication with the patron.

If larger libraries were to join PINES, claims functionality would need to be tested thoroughly.

CATALOGING

One special feature noted in Evergreen which is not available from any of the vendors evaluated is the use of the MARC 856 tag, subfield 9 to determine which libraries own an item. This information is used to control the display of these electronic resources so that only the patrons of the owning library are shown the link for access. Although the other systems offer similar functionality, it is not as simple and elegant as what has been implemented in Evergreen.

The ability for Evergreen to display multiple bibliographic records as a group under a single title is the beginning steps of implementing the new cataloging methodologies now available. The CARL.X discovery interface is the only one currently making similar functionality available. Like PINES, the majority of libraries currently work with Zepheira for manipulating records and making them available to search engines.

Larger libraries usually require fairly sophisticated batch loading capabilities and options. PINES would need to test the batch loading capabilities in Evergreen and possibly put some development time into these tools to support the needs of these large libraries. Spine and pocket label printing is another feature which would need to be tested thoroughly in new web interface, with some possible development required in this area as well.

CIRCULATION

The current holds processing and routing features in Evergreen are very sophisticated. Although not perfect, it is just as good as most other systems, and better than some. The group level holds is a very nice feature, also not found in many other ILS options.

The turnaround of 4-5 days to get holds through the courier is acceptable to current PINES libraries. This may be an issue for larger libraries wanting a quicker delivery. The current settings available in Evergreen could be re-worked to provide for quicker turnaround in some cases, however, this area also relies on the physical courier services which may require a separate review.

PINES staff shared information on what is currently on the “wish list” for Circulation and the Consultants believe that these features would be desirable to not only the PINES libraries but to the entire Evergreen community. The items include:

- Expanding the partial payment options
- Streamlining the patron messages and blocks
- Missing item/hold improvements
- Ability to test notification methods
- Allowing circulation staff to change item status to “discard”
- Inventory functionality

Some of the features which would need testing, review and possible development when adding larger libraries to the system include:

- Ability for patrons to place holds on “on order” items
- Allow member libraries to control hold slip customization
- Provide the ability to store hold slip and other templates on the Evergreen server or a local server instead of on the individual workstations
- If a large library has implemented RFID, they won’t have barcodes for their items and Evergreen would need to handle this
- Loading of circulation data from current systems

OUTREACH AND INTERLIBRARY LOAN

With the tremendous number of resources available through the PINES libraries, the need to borrow from libraries outside the group is greatly diminished. Concentrating on efficiencies which can be found in the routing, filling and delivery of requests within the group may be of more importance than expanding ILL functionality. Developing more integrated interlibrary loan features may only be of interest if a large library which is a net lender joins the group.

Large libraries often provide a great deal of outreach services. The outreach functionality within Evergreen would need to be reviewed and new features for serving homebound and books-by-mail patrons could be of high importance to a large library.

PUBLIC INTERFACE

There are several areas in which the public interface for Evergreen has more functionality than those offered by the vendors evaluated during this project. None of the vendors surveyed offer the ability for patrons to maintain their history of hold activity. The other systems allow patrons to optionally retain their circulation history but not holds. The numeric searching features within the Evergreen public interface are also unique, especially the MARC tag searching. Although the surveyed vendors do have some of these searching features available to the staff, none have all of the numeric search options in the public interface. The ability to browse the catalog by title, subject, author, etc. is another area in which Evergreen excels.

The public interface to Evergreen could use some attention and development. Some of the other areas which could be examined for development include:

- Improving the speed. The time it takes to get the results of a search are at times unacceptable. Patrons are used to using a variety of web services which provide near-immediate responses to their queries. If the searching is too slow, patrons will not use the site.
- Creating an app for iOS should be a priority since Apple devices are used by such a large percentage of the population. Having a responsive design in the public interface as well as apps for both iOS and Android is currently the best way to ensure that you are providing access to all of your patron base.
- The addition of an administrative interface for maintaining a Kid's Catalog would ease the workload of PINES staff as well as potentially making this a feature used by more libraries.
- Examination and development of more features which ensure that a patron finds appropriate materials would be a valuable addition to the public interface. The addition of "did you mean," spellcheck or other features would enhance the searching experience.
- Adding more geolocation features, especially in the mobile apps would be especially helpful to a patron, providing maps and other visual clues instead of long lists of holdings information.

For larger libraries, an automated patron registration process and customization options for the search and result pages of the public interface would be important.

REPORTS

A great deal of time is spent creating and distributing custom reports for existing PINES libraries. For larger libraries, with their own technical staff, PINES might want to think about providing read-only SQL access as well as extensive training on all of the available report methodologies.

SERIALS

Basic functionality for paper subscriptions is handled well in Evergreen, however, a few features should be reviewed for potential development. These include:

- Addition of claiming capabilities
- Ability to enter summary holdings statements or retention information to be displayed in the public interface
- Federated searching or other methods for integrating more eresources into the search interface

IT AND SYSTEM ADMINISTRATION

The most negative aspect of the Evergreen system noted by the Consultants is the speed. This is true in both the public and staff interfaces. This may entail changes to hardware, networks, software and/or basic utilities such as indexing methodologies. Since speed is already an issue, the addition of any large libraries would require that these issues be resolved before any new additions could be made.

Using open source software has one huge advantage to all proprietary software options, you can set up and utilize as many instances of the software as you wish. With proprietary software, each installation

comes with a cost and most vendors only provide the production system and one testing/training system for clients due to these cost issues.

In general, bringing larger libraries into the PINES system would require a higher level of local customization capabilities in all areas, including notices, receipts, public interface, etc.

3rd PARTY INTERFACES

Larger libraries would bring more third-party products which would need to be integrated or interfaced with Evergreen. This is an area which may require testing as well as development, depending on the vendor products in use. SIP2, the standard used for many third-party products has been developed for Evergreen and works well. Various APIs have been developed by others in the community and would need to be implemented, tested and possibly further developed if PINES libraries decide to implement a third-party product such as BiblioCommons or other product which needs more interactive capabilities with the ILS. Security Assertion Markup Language (SAML) is one example of a standard which has been developed to allow for single sign-on capabilities which is another area that is becoming more important for the ILS in the future.

PUBLIC INTERFACE

The creation of discovery layers has given libraries a much wider range of public interface options. Many of the discovery layers can be used with a wide variety of underlying ILS products. Although many libraries continue to use the public interface(s) available through their ILS vendor, others have decided to implement a separate discovery layer for their patrons. Issues with slow development, missing features and additional costs for the solutions available through the ILS vendors has brought about the creation of third-party public interfaces.

BiblioCommons

BiblioCommons offers what is probably the most complete solution from the proprietary options. They have the largest market share in the public library sector. As the product has developed, it has incorporated many of the features that are most desired by public libraries. Searching algorithms are sophisticated and they have integrated a large number of external resources as well as features for patron engagement.

The two main issues with BiblioCommons for a group like PINES are features addressing consortium level displays and cost. BiblioCommons was built for individual libraries and has slowly been adding capabilities for consortium but does not have the flexibility to provide appropriate displays of holdings and other local information for consortium. The costs for implementing and maintaining BiblioCommons has been too high for many libraries and the Consultants believe that this would also be true for a group as large as PINES.

The ability to use BiblioCommons is dependent on the ILS and the APIs available. Since King County Library System in Washington State has implemented the product, the basic code necessary has

already been created. There would probably be some installation and customization work required by PINES but implementing BiblioCommons would not require completely fresh development.

Open Source Options

The two main open source options for a discovery layer include Vu-Find and Black Light. Both of these options have been implemented by libraries and have active development communities. Both discovery layers are being used by Evergreen libraries so, as with BiblioCommons, the basic programs required have been developed. The installation and customization requirements for PINES would need to be evaluated for each of these options to determine the amount of initial resources required.

Open source discovery layers are complex and would require a great deal of expertise and effort on the part of PINES staff to maintain. The group would need to become a part of the community for either product to ensure that the needs of PINES and other consortium are taken into consideration as development continues. There would most likely be features which PINES would want to add or enhance which would mean additional monies set aside for ongoing development.

For the future, it would be beneficial to continue to follow the development of the FOLIO system. The public interface module for this system might be an option in the future. Since FOLIO development is shared between libraries and library vendors, enhancements and developing new features may be more cost effective.

RECOMMENDATIONS

The goals which were considered during this project are:

- Allow PINES to continue to support the current member libraries at highest level possible
- Add features and functionality to match the expanding capabilities within the ILS
- To investigate the possibility of providing Evergreen as an option for larger libraries in the state

The three systems evaluated during this project each offer a solution which could support the needs of the PINES libraries. None of these options are perfect, a migration to any of the three options would mean that PINES libraries would gain some new features but would also lose features now available in Evergreen. The biggest loss with moving to a proprietary ILS is ability to be a major player in the continuing development of the product. Every vendor has their own vision of the future of their system and that may or may not mirror the needs and desires of the PINES libraries. Although PINES could still utilize APIs to create new functionality for any of these systems, that would mean additional staff and financial resources expended, in addition to the fees paid to the vendor.

This project did not include gathering pricing information. The main reason behind this is that the vendors would not be able to give accurate pricing information without knowing exactly which options would be selected by PINES. Any pricing information given would not reflect the true price of the system for PINES. With CARL.X, many of the features are included in the core system, but not all of

them. For both SirsiDynix and Polaris, there are many options available which can change the cost significantly.

Migrating to a new system is an expensive, time-consuming, resource-consuming and an all-around difficult process. For a group the size of PINES, migrations are even more complex and challenging. Most libraries migrate to new ILS solutions in order to gain major new functionality, to save money or to move away from unsatisfactory business relationships. The underlying structure of each system is unique and requires that data be mapped from the old system to the new. This is an arduous task that often means that some data is lost.

When looking at the reasons for moving to a new system, the usual issues were not identified in discussions with PINES.

New features

As noted in this report, the systems evaluated during this project do have capabilities not currently available in Evergreen but also highlights the fact that some functionality would be lost with any of the potential vendor systems. The Current Environment section of this report mentions features and functionality which could be improved in the system. Some of these improvements would be required for current PINES libraries while others would only become an issue if larger libraries joined the group. The biggest issue identified which could affect the future of the PINES system is the response time for searches and other staff functions. All of the issues and improvements require staff and programming resources to address, however, they are not insurmountable. The great thing about open source software is that if a feature is identified as one that PINES would like to have available, they can have it created and added to the system.

Cost Savings

Moving from an open source ILS to a proprietary ILS would mean a large expense for the migration as well as continuing maintenance charges from the vendor which increase each year. The cost for the 386 SIP connections required the self-check machines employed at PINES libraries could alone incur costs of over a \$500,000 from proprietary solutions. Staffing requirements would not be decreased since PINES would still be the first line of support and also responsible for some of the higher-level management tasks for the system. Moving the hardware to a hosted solution may reduce costs and provide more flexible access, however, this is true for both open source and proprietary systems.

Unacceptable Business Relationship

With open source software, users are a part of the community and not in a client-vendor type of situation. If you are not happy with the development, you can seek assistance from any number of vendors. The Consultants observed that the PINES staff and libraries are still very engaged with Evergreen and the Evergreen community and have a great deal of influence.

SUMMARY

The Consultants recommend that PINES continue to utilize and develop the Evergreen system at this time. Although the other systems evaluated during this project would all be options for the group, the

costs and resources required for migration and ongoing maintenance of the system are not balanced with the additional features which would be gained.

In the ever-changing technological environment, Evergreen will need to continue to be improved and updated. PINES saves literally millions of dollars by utilizing open source ILS software. The Consultants recommend that PINES invest more into the development of Evergreen and finance more projects each year, just to keep supporting the current libraries. If larger libraries are added to the group, there should be an even larger investment in development.

The areas which could benefit from additional development include:

Response Time – This issue needs to be addressed as soon as possible. The solution may entail a great deal of effort and may require changes to many parts of the system but should not halt development in other areas. Since this could affect some underlying structure within Evergreen, this project may need the involvement of others in the Evergreen community.

Update to Patron Interface – The public interface needs a face lift! There are a number of patron engagement features which need to be added to the interface, with larger projects such as deeper integration with eresources that could greatly improve the user experience. The Consultants believe that putting some money toward an update to the Evergreen public interface would be more effective than purchasing a third-party discovery layer or expending the resources required to implement a different open source solution.

Additional Support for Reporting & Testing – The reporting needs for libraries is constantly growing and with development comes the need to perform comprehensive testing. The Consultants recommend that a new position be added to assist current PINES staff in testing new features and creating new reports.

Accessibility – The ILS solutions available today, including Evergreen, have put most of their efforts into accessibility options for the public interface. Updates from the Web Content Accessibility Guidelines (WCAG) and state Accessibility Laws should be included in any new programming for the public interface. In addition, now that the staff interfaces are web-based, there is also the opportunity to implement these same guidelines and laws for the staff as development continues.

BIBFRAME – BIBFRAME is a new structure for bibliographic data that was created to replace the MARC21 standard. This new structure or framework will allow bibliographic information to be more easily shared on the web and utilizes linked data principles to make this happen. Every ILS is currently working on ways to help make the transition from MARC to BIBFRAME as seamless as possible without losing any of the content now held in MARC records. Like other ILS solutions, Evergreen has the ability to export data to a third party for conversion to BIBFRAME. Zepheira is the company that currently provides the conversion and exposes this information to the web. As this type of functionality matures, the ILS itself will need to be able to store data in the BIBFRAME structure and provide access for web search engines such as Google. A structural change of this magnitude needs to be well thought out and should have experts from all areas of the ILS involved in discussions, planning and design for incorporating the new formats and functionality into the ILS. PINES is in a very good position to be a part of these changes, if not be a leader within the Evergreen community.

Development of New Features – There are already lists of new features and functionality that PINES would like to have added to Evergreen. If larger libraries are interested in joining PINES, a number of other items will be added to the list. Whenever possible, multiple channels of development should be done simultaneously, allowing the system to grow in multiple ways in a reasonable time period. With open source, money can be funneled into developing new features instead of paying maintenance to a proprietary vendor. For an ILS to stay relevant, many new features need to be added every year.

Move to Hosted Environment – The Consultants recommend that PINES investigate the possibility of moving the ILS hardware to an Evergreen-specific support service such as Emerald or Equinox. Redundant connections to the internet, multiple backup options and Evergreen-specific technical knowledge would all be part of the package. PINES staff would still be required to manage the hosted services; however, some staff time could be freed up to offer more support for PINES libraries.