



Five-Year Plan  
Technology and Resource-Sharing  
2020-2024

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## 1. Introduction

This document is intended to comply with [Wis. Stats. 43.24 \(2\) \(m\)](#), which requires public library systems to engage in planning activities with stakeholders and oversight authorities.

## 2. Background

Lakeshores Library System (LLS) was created in 1982, when it made the transition from a county library service to a federated public library system. One year later, Walworth County joined LLS. In 2002, several small libraries in Dodge county joined the automation system used by LLS to form the "WAVE" consortium. In 2007, LLS and the (now former) Mid-Wisconsin Federated Library System began collaborating to expand, fund and staff the instance of library automation software - a project called the "SHARE Consortium". The delivery networks of the two public library systems were also linked, so that materials sharing could occur between any library that utilized the common software.

The SHARE Consortium collapsed in 2015, reducing the number of SHARE participating libraries from 53 to 15. The Kenosha County Library System (KCLS) then joined SHARE in 2016, to be followed in 2017 by the Arrowhead Library System (ALS). In its current form, the SHARE membership includes 26 member libraries at 31 physical sites.

The library services field has undergone a tremendous amount of change since 1982, particularly with regard to technology. Many library services have become completely automated, while remote troubleshooting tools, server virtualization, fast networks, cloud storage and inexpensive hardware have dramatically changed what is possible for a small IT staff to manage and create.

Fast, reliable networks, local IT support, and highly-functional library automation software are often at the top of the list when LLS solicits feedback from member libraries. This plan is therefore based on meeting these core needs, while also seeking opportunities to collaborate with other partners on projects that will improve services to member libraries - both in the local sense and with regard to the "bigger picture" of technology-facilitated library services on a statewide scale.

## 3. Addressing the Technology Needs of Member Libraries

### 3.1. Wide Area Network

Current State. LLS maintains a Wide Area Network that includes each of its member libraries. Over the last several years, LLS staff have worked with Wiscnet/Badgernet and the partnering library systems of KCLS, ALS and most recently the Southwest Wisconsin

Library System (SWLS) to logically converge our networks. This has enhanced data interchange between SHARE libraries regardless of home system, allowed LLS staff to remotely monitor, access and resolve connectivity issues. It has also facilitated closer relationships between system administration and staff.

Future Goals. The first goal is to (1) maintain and improve the state of interconnection between the WAN infrastructure of the four systems. The second goal is to (2) advocate for additional regionalizations of WAN's between public library systems, up to and including logical interconnection on a statewide basis.

### 3.2. Local Area Networks

Current State. Each LLS member library has sovereignty over its own local area network (LAN). Most member libraries receive support for their LAN's through LLS, along with several member libraries of ALS. Through a service agreement, LLS is also providing support for the LAN's of SWLS member libraries. Generally speaking, most libraries utilize a common stack of hardware including a router (linked to a WAN), a switch (routing traffic within the library) and one or more wireless access points (providing WiFi to library users and staff). Because of significant time spent up-front by staff in making sure each library has up-to-date hardware installed, LLS is able to provide active network monitoring and high degrees of remote network and desktop support. The LLS member libraries are, generally without exception, all "modernized" and updated with proper hardware. Most of the ALS and SWLS member libraries have also been brought up to standard according to the service contracts we maintain.

Future Goals. (1) LLS staff will continue to work through the process of network infrastructure updates to bring remaining ALS and SWLS member libraries contracting with us up to standard. (2) LLS staff will assess, compile, and make available the outcomes of our various inter-system IT collaborations for use by the greater Wisconsin library service community in whatever capacity is needed. (3) LLS staff will continue active research and development to stay abreast of additional disruptive technologies that become available to further levels of service, savings to libraries, or to join transformative partnerships.

### 3.3. Internet Access

Current State. Access to the internet is a bedrock service. All of our member libraries offer internet access to their users, either via a Badgernet circuit, or via a private internet service provider.

Future Goals. (1) LLS will continue to monitor, administer, and facilitate awareness of Badgernet services, and advocate for the best interests of our member libraries and

public libraries in general when opportunities arise to participate in discussions with the Departments of Public Instruction, Administration, and Badgernet.

### 3.4. Public and Staff Computer Management

Current State. Fourteen of the fifteen LLS member libraries utilize the local IT service offered by LLS for management of library PCs for staff and the public. A number of ALS member libraries also participate in this program via service contracts. All SWLS member libraries are enrolled in this program via an annual support contract. LLS staff utilize a combination of technologies and techniques to manage this environment, including the following:

- Annual group purchases of PC's, with standard warranties and service plans;
- An online help desk;
- Remote desktop support tools;
- Windows Powershell;
- Windows Server tools such Group Policy Objects and Active Directory;
- Faronics DeepFreeze Enterprise;
- Low barriers to access via interconnectivity of library system WAN's.

Future Goals. LLS staff will (1) maintain the current degree of stability enjoyed by member libraries, while (2) continuing their work with SWLS and ALS member libraries to achieve parity with regard to "supportability" (examples: advocating for regular budgeting and replacement of library PC's with the same characteristics as LLS member libraries, extending remote troubleshooting processes to the SWLS and ALS member libraries, etc.). LLS also hopes to (3) share what we learn from these partnerships with the greater Wisconsin library service community.

### 3.5. Library Management Software

Current State. LLS staff administer an instance of SirsiDynix's "Symphony" library automation software suite, including a patron discovery platform (Enterprise) and a data analytics platform (BlueCloud Analytics). Numerous customizations have been made to extend the functionality of this system to library staff and patrons. The SHARE Consortium has been created to fund and govern the automated software, and includes the member libraries of LLS, KCLS, and ALS. After having facilitated two successful projects to import the library data of two partnering library systems over the last three years, LLS is now focusing on maintaining and extending functionality for the current group of SHARE member libraries.

Future Goals. LLS staff will (1) maintain the stability of the platform while (2) continuing to develop and extend its capabilities, particularly with regard to patron activities that can be completed online.

### 3.6. Procurement at Scale

Current State. LLS staff are, as of this writing, beginning preparations for the fifth consecutive annual group purchase of PC's. This is a cooperative purchase program currently including the member libraries of the five library systems in our region. LLS staff are also expecting to facilitate one or more collaborative purchases of RFID-related hardware and RFID tags on a broad regional basis.

Future Goals. LLS will (1) continue to seek-out opportunities to create economies of scale for its member libraries on its own and in concert with other library systems, if possible.

### 3.7. Consulting

Current State. The LLS technology team serve as consultants on a range of technology-related topics. Such topics include:

- Equipment procurement;
- Computer & WiFi usage policies;
- Staff & patron usage policies related to the library automation software;
- Erate, LSTA, and other state or federal grant programs;
- Other topics as needed.

Technology consulting is available to the LLS member libraries both on-demand and in the form of orchestrated annual visits to assess conditions at the libraries and propose solutions to any issues uncovered.

Future Goals. (1) LLS staff will continue to provide technology consulting whenever our member libraries need it, (2) will continue to refine the processes and tools they use to consult with and advise our libraries and, (3) provide consulting to other system partner member libraries, systems, or state agencies when appropriate.

## 4. Information Technology Strategies

### 4.1. Lakeshores Library System (In-House)

LLS's office infrastructure features a basic set of resources including PC's, a 200 megabit internet connection, and a series of virtualized servers and other tools hosted online and our WAN headend located at the Waterford Public Library. Our general strategy with regard to the office and the daily work of the tech team is to focus on simplicity and responsiveness. One additional strategic aspect of the IT staff's work is that they often focus on underlying core technologies. By making expanded use of Powershell

tool, for example, staff are able to automate much of the PC deployment and upgrade process, as well as perform much of the work remotely.

#### 4.2. Member Libraries

Typical library infrastructure includes a WAN router, a LAN switch, one or more wireless access points, a number of staff and public access PC's, assorted other library assets including scanners, copy machines, and other hardware. The overall strategy employed by the LLS IT team is to maximize bandwidth availability when appropriate, manage library technology environments in a manner that is as simple and responsive to local needs as possible, and perform research and development into emerging technologies.

#### 4.3. Partner Systems

LLS performs local IT support for ALS and SWLS. LLS also provides library automation software support for ALS and KCLS. Through these partnerships, the relationships between the systems have been strengthened and libraries benefit through greater economies of scale. When creating service agreements with partner systems, cost recovery (as opposed to profit) is the main goal when negotiating fees or service barter arrangements. LLS provides generally the same set of local IT services to all the libraries enrolled in the program regardless of system

#### 4.4. Greater Wisconsin

Through the partnerships above - especially with regard to SHARE and the provision of local IT services to the SWLS system - there is a significant opportunity to pilot, test, and prove (or discard) new methods of providing services. LLS hopes that these partnerships will remain sustainable and serve as prototypes for other systems to improve upon.

### 5. Resource Sharing Strategy

#### 5.1. LLS Member Libraries and SHARE Partner System Libraries

Through the SHARE automated library software platform, all LLS, ALS and KCLS libraries are able to share physical resources seamlessly in a manner that is patron initiated.

#### 5.2. Resource Sharing with Greater Wisconsin and Out-of-State

LLS IT staff developed an integration with the state interlibrary loan platform (WISCAT) several years ago. This integration uses the NCIP communication protocol. Negative result searches in the SHARE online catalog present the user with an opportunity to

authenticate directly into and search the WISCAT catalog. Any patron-initiated holds placed through WISCAT are then either automatically approved or queued for staff moderation. When items arrive from outside of SHARE via WISCAT, temporary item-level records are injected into the database. This technique allows library staff to process WISCAT items using the same workflow as regular library items, eliminating the need to maintain separate workflows and separate tracking methods for ILL items. LLS maintains an ILL clearinghouse to quickly respond to and fill requests from other libraries in Wisconsin and outside of Wisconsin for items owned by LLS member libraries.

### 5.3. Physical Delivery

LLS maintains a physical delivery service through a vendor contract that renews every three years, most recently as of January 1, 2020. Key changes for the 2020-2022 delivery contract cycle include a requirement that our vendor up-size his delivery van to address delivery volume issues created as a side effect of increased material volume between SHARE member libraries. We expect a further process of tuning and tweaking to optimize the delivery service for our member libraries and SHARE as the next several years progress.

### 5.4. Online Databases and E-Content

LLS member libraries utilize a cooperative purchasing strategy for many resources. To further economize, the full SHARE consortium has begun experimenting with cooperative purchasing. Licensing of the Lynda.com (now Lynda Learning for Libraries) platform in 2018 is an example. LLS will continue to facilitate the sharing of online databases and e-content moving forward.

### 5.5. RFID and Automated Materials Handling

The SHARE Director's Council saw fit to redirect some member funding in order to establish two annual RFID adoption grants beginning in 2020. These grants are open to any SHARE member library that has not yet tagged, but priorities are given to one small library and one library with the greatest resource sharing impact each year. This rolling grant program will be combined with LSTA-fueled procurements of large numbers of RFID tags so as to lower the cost of RFID adoption significantly. In addition, LLS has provided a grant to the Racine Public Library (RPL) for the specific purpose of up-scaling a planned Automated Materials Handler machine to 24 bins, which would be able to "fine sort" for all LLS member libraries and "rough-sort" for KCLS and ALS. Agreements have been signed and delivery of the device is expected at RPL in the late spring or summer of 2020.

## 6. Professional Development Strategy

With regard to both LLS staff and member library staff, the strategy utilized by LLS in this area is opportunistic and in response to specific needs. LLS staff typically attend professional development activities at the annual Wisconsin Library Association Conference, the annual COSUGI Conference (SirsiDynix annual conference), and the WAPL annual conference. Additionally, any specific needs or requests by LLS staff for professional development resources are discussed ad hoc or as part of annual staff evaluations. Resources are granted whenever possible and appropriate. LLS IT staff incorporate staff education into annual visits, impromptu visits, and usually offer 2-4 library staff training opportunities each year.

## 7. Evaluation Strategy

Evaluation is largely handled through one-on-one meetings, by listening to first person accounts, and by online feedback tools such as surveys. LLS expects to conduct an in-depth service-related survey in early 2020 that will serve as an overall strategic planning tool, but also include technology-specific aspects to assist in mapping organizational objectives for the next 1-3 years.

## 8. Information Technology and Resource Sharing Budget Information

A copy of the approved 2020 system budget is attached. In summary:

- Roughly fifty percent of the LLS staff budget is devoted to IT staff;
- LLS estimates spending \$25,000.00 in library system state aid on technology expenses not related to staff;
- LLS will manage a co-op member library budget of roughly \$157,000.00 in 2020;
- LLS will manage a SHARE software and resource sharing budget of roughly \$200,000.00 and a contingency budget of \$34,000.00 in 2020.

## 9. Development of the Plan

The draft of this plan was written after conducting a review of the previous technology plan and interviewing the LLS IT staff to gain an understanding of current states, attainable goals, and realistic expectations as well as the degree of planning that is possible within an environment as dynamic as technology. LLS member libraries were given an opportunity to review and comment on the draft plan following its completion. The plan was reviewed and signed by the LLS Board President, submitted to the Department of Public Instruction, and will be reviewed by the full LLS Board during its regularly-scheduled meeting in January of 2020. Any amendments or changes shall be immediately filed with the Division.

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Plan Approvals:

Steve Ohs, Administrator  
Lakeshores Library System

Stephen Ohs

Dated 12/17/19

Jane Brossard, President  
Lakeshores Library System Board

Jane E. Brossard

Dated 12/18/19

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