

INFORMATION TECHNOLOGY STRATEGY



LEANWI

A Collaborative Partnership

January 2020 – December 2024

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EXECUTIVE SUMMARY

This strategy builds a framework for success, outlining categorical service goals shared by LEAN WI partners. It is a reference for supporting the annual Library System Plans of respective partners, representing the Technology Plan for LEAN WI partners and member libraries, anchoring LEAN WI short- and long-term operational technology planning, and supports additional locale-specific plans addressing a partner's unique needs. It is also a guide for Information Technology staff of partner systems and member libraries, presenting a clear picture of immediate and long-term goals.

Efficiency is the intended outcome for each goal. The LEAN WI partnership aims to build upon and continue its partners' respective leadership in architecting, implementing, and growing its durable and sustainable service model, maximizing productivity and minimizing resource expenditures. Partners will continue to leverage that productivity across all other departments and member libraries, providing access to the resources necessary to achieve their own goals and working to help them identify and pursue efficiency building opportunities. Standardization, centralization, and deduplication of equipment, management tools, and service containers is core to the enterprise services framework LEAN WI partners have developed and continue to build.

Other intended outcomes include: maintenance of the high quality network and technology services infrastructure which partners have blended and improved since 2015; regular reevaluations of the production technology environment with comparative reporting over time; regular evaluations of new technology concepts and service goal solutions to weigh their potential benefits against the cost of implementation and maintenance; development of new services and programs to help member libraries continue maintaining a high sense of relevancy and value to their public; and regular evaluations and efforts to improve communications.

Over the past decade, economic factors led to a reduction and subsequent flat funding to Public Library Systems in Wisconsin. In response to this, LEAN WI partners increased focus on developing information technology resources and services which would help member libraries maintain and improve the delivery of services to their communities in a limited resource climate. While the funding environment has had positive indicators in the recent short term, efficiency and effective leadership in technology services remain at the heart of the LEAN WI ideology, and is key to continued success in the expansion of high quality, sustainable technology services.

LEAN WI Mission and Purpose

The Libraries and Enterprise Applications Nexus of Wisconsin (LEAN WI) partners cooperate on the joint implementation and support of technology services, sharing resources between partner library systems to the greater benefit of each partner and member library.

Technology Leadership

Engineering and Operations Lead (Currently IFLS IT Director) – This role works with the LEAN WI Technology Team to develop and implement operational plans which serve the needs of the partner systems and member libraries. This role works closely with the **Business Management Lead** to ensure long term strategies inform and are informed by operational planning and production services and that forecasting of resource needs is feasible and sustainable. This role leads operations for production infrastructure and technology service.

Business Management Lead (Currently WVLS CIO) – This role works with the LEAN WI Technology Team to orchestrate the development of information technology strategy and helps the LEAN WI partnership achieve efficiency as advocate and coordinator for the executives and administrators of partner systems and member libraries. This role garners the sense of direction and related needs expressed by leadership in each partner system and works with the **Engineering and Operations Lead** and the **Technology Support Lead** to ensure the technology service framework adjusts to those needs as they change over time. This role leads long term development of services and sustainability planning, business relationships, and business management operations for LEAN WI partners.

Technology Support Lead (To be assigned) – This role works with the LEAN WI Technology Team to develop and coordinate technical support services for partner systems and member libraries. This role works with the **Engineering and Operations Lead** to ensure technical support capabilities align with technology service provisioning and with the **Business Management Lead** to ensure support resource distribution is consistent and equitable among all partners.

Partner systems will continue coordinating and working to ensure primary leadership roles are not concentrated in a single partner system. The spirit of the LEAN WI partnership is one of collaboration, cooperation, and joint effort. The distribution of executive leadership and management facets in the department of technology services is intended to create a stronger whole via deduplication of the entirety of efforts an individual technology manager would otherwise be responsible for in a standalone system. Distributing the roles among more than one partner acts to reinforce cooperation and collaboration, encourage more depth, and ensures durability of the partnership.

Technology Team

The LEAN WI Technology Team is made up of technology staff from partner systems. This first iteration of the LEAN WI Technology Strategy will focus primarily on the engineering core. Staff from any partner may lead one or more specific technology services. The LEAN WI foundational principles are collaboration, cooperation, and joint effort. This strategic plan uses the term Technology Team in reference to the engineering core as well as the broad, more inclusive set staff who serve within the LEAN WI technology services stack in any capacity. The Technology Team thus may refer inclusively to those who manage and support technology infrastructure and core applications as well as those who administer and support the Integrated Library Systems (ILS), provide or coordinate training on technology subjects, and provide direct technology services, consultation, and support such as website development and digitization projects.

SECTION A – TECHNOLOGY STRATEGY: A VISION FOR TECHNOLOGY LEADERSHIP

In any organization the strategic planning, implementation, and management of information technology resources is a continually evolving process. Innovation leads to changes and divergence across usage models, sometimes altering an environment subtly, other times driving significant change before people are ready. The very way we assess new services is fluid and dynamic, with social pressures, economic factors, and manners of maintaining relevancy continuously changing. Determining when to adopt new trends, and when to maintain an existing system of services is no simple task.

Why LEAN WI Technology?

LEAN WI partners empower libraries to accomplish amazing things. Our vision is to ensure that all libraries have access to the technology they need to succeed, period. LEAN WI is a demonstration of the success of convergence. Partners connect libraries physically and personally, working with members to cultivate a strong network of capital, information, and resource sharing.

How do we Achieve IT?

Trust, cooperation, shared resources, mutual benefit, selfless service.

What IT is.

Information technology services needed by libraries are like those of most organizations with multiple physical locations spanning large regions: Support for information creation, discovery, consumption, and sharing. Desktop and web application access, information security tools, multiple shared Integrated Library Systems (ILS), supporting infrastructure, local technology strategy and planning consultation, and education are also important components. LEAN WI envisions a technology service environment where library administrators, staff, and public users in any library can focus on the business of quality library programming and services without worry of technology capacity, constraints, or compatibility.

The LEAN WI Technology Strategy establishes a cohesive long-range vision across these high-level categories:

- Common and Divergent Goals
- Evaluation and Assessment
- Benefit
- Objectives
- Resources
- Equitable Service

The LEAN WI Technology Operations Framework provides structure and focus for evolving operational plans adopted to meet current and future objectives:

- Enterprise Service Architecture
(Libraries Win)
- Viability and Continuity
- Infrastructure
- Business Management
(Consulting and Advocacy, B2B)

SECTION B - TECHNOLOGY STRATEGY: OPERATIONS FRAMEWORK

LEAN WI partners will work cohesively to unify technology resource management and sharing, offering all member libraries consistency in the available and supported information and technology services necessary to empower efficiency and productivity, enabling efforts which positively impact their communities.

LEAN WI Technology Objectives

These strategic objectives inform the Operational Technology Plan. The plan details the current position of the LEAN WI Information Technology services describing the processes and tools used to complete these objectives.

Enterprise Service Architecture – Libraries Win

The origins of the LEAN WI partnership are connected to a large project undertaken by Indianhead Federated Library System, Northern Waters Library Service, and Wisconsin Valley Library Service to explore the value, feasibility, and overall desirability of the convergence of over one hundred public library locations across twenty-five counties in Wisconsin to a single ILS consortium and application. The effort, called Project WIN (for WVLS, IFLS, and NWLS) did not lead to ILS merger, but the community of professionals sharing information and crafting micro-models of resource sharing scenarios enabled two of the systems to focus on sharing core technology resources. The partnership which form was dubbed LEAN WI. In honor of the time, effort, and admirable professionalism which system and member library colleagues put into that project LEAN WI leadership appropriated the librarieswin.net and librarieswin.org domain names used to host the original Project WIN website and named the technology services layer “Libraries Win.”

Principal Outcomes:

- Standards Based Core Services
- Unified Support Structure
- Identity Agnostic
- Prioritize Facilitation
- Durable
- Sustainable
- Simple / Elegant
- Minimize Constraint

Infrastructure – LEAN WI

The core of LEAN WI is the infrastructure interconnecting libraries with internet, Libraries Win services, and other services or service frameworks. Assets are jointly owned, and barriers to entry for future partners reduced with a present-forward cost sharing model prioritizing sustainability over recovery of past expenditure. Recognizing that a particularly significant barrier to collaborative effort is perception of fairness conflicting with consistency and equitable service across a partnership, a core tenet of LEAN WI is value over fairness. It is more valuable for each partner to contribute resources equally irrespective of the various diversities across a number of metrics. Each partner gets more out of the partnership than it puts in. Continuity of partnership is the greatest value and thus LEAN WI partners focus on strengthening the infrastructure layer with minimal complexity in evaluating cost distribution formulas or usage levels.

Principal Outcomes:

- High Quality
- Bidirectionally Scalable
- Resource Efficient
- Enables Libraries Win Service Success
- Durable
- Sustainable
- Simple / Elegant
- Inclusive

Viability and Continuity

Without assurance of continuity, a resource holds little long-term value. Viability of partnership, vision and direction of strategy, production operations, and serviceability is critical to cross departmental and member library adoption of services and trust in platform. The theme of simplicity, scalability, durability, and sustainability propagates through all layers from the business relationship maintaining the LEAN WI partnership through infrastructure and service framework to individual services and service teams, non-partner platform consumers, internal staff users, member library users, and the vast array of micro-dependencies therein.

Principal Outcomes:

- Team Unity
- Broad Service Awareness
- Resource Availability Forecasting
- Inclusion of Additional Partners
- Professional Development
- Fiscal Prudence
- Documentation Management
- Communication

Business Management

As a strong infrastructure must be relevant to the service layer it supports, strong business management must be relevant to the operations it supports to successfully ensure the viability and continuity of partnership, platform, and services.

Principal Outcomes:

- Service Coordination
- Needs/Demands Aggregation
- Resource Planning
- Partnership Development
- Consultation
- Fiscal Prudence
- Vendor Management
- Succession Planning

SECTION C – OPERATIONAL TECHNOLOGY PLAN (DYNAMIC)

Wisconsin Statute 43.24(2)(m) (<https://docs.legis.wisconsin.gov/statutes/statutes/43/24/2/m>) reads:

“Planning with the division and with participating public libraries and other types of libraries in the area in regard to library technology and the sharing of resources. By January 1, 2000, and by every 5th January 1 thereafter, the public library system shall submit to the division a written plan for library technology and the sharing of resources.”

LEAN WI Technology Leadership recognizes and places appropriate priority on the value of presenting long term strategy to their respective Systems’ Boards of Trustees as well as the State of Wisconsin and understands the fluid nature of relevant technology operations. LEAN WI partners maintain an adaptive and evolving operational technology plan to facilitate service needs in a manner which supports the long-term technology strategy. These operational goals and objectives align with the long-range strategic objectives and principal outcomes.

Each Operational Objective under the following Goals currently has or will have one or more Operational Strategies abstracting the specific sets of production services serving or intended to satisfy them. In tandem with a comprehensive effort to update and catalog applicable operational documentation during 2020, this plan will be updated to include the operational strategies in production and those definitively planned for production implementation during 2020 and 2021. Additionally, newly identified Goals and Operational Objectives will be documented along with their respective Operational Strategies.

Goal: Provide comprehensive and holistic technology consultation to library administrators, assisting in the development of locale-relevant technology plans and budgets in concert with other libraries.

Strategic Objectives:

Enterprise Service Architecture, Infrastructure, Viability and Continuity, Business Management

Coordinator: Business Management Lead

- **Operational Objective:** Provide libraries with technology expertise and consultation services.

Strategy:

- **Operational Objective:** Communicate regularly with library technology staff to consult and advise on technology infrastructure and workflow practices.

Strategy:

- **Operational Objective:** Facilitate coordinated procurement of technology capital, third party services, and software licensing for libraries.

Strategy:

Goal: Facilitate technology training for system and library staff.

Strategic Objectives:

Viability and Continuity, Business Management

Coordinator: Business Management Lead

- **Objective:** Support LEAN WI partners in meeting respective Library System Plan goals and objectives for technology training and training in other service areas.

Strategy:

Goal: Provide a high quality, durable, and scalable technology infrastructure and enterprise service framework capable of meeting current and planned service requirements.

Strategic Objectives:

Enterprise Service Architecture, Infrastructure, Viability and Continuity, Business Management

Coordinator: Engineering and Operations Lead

- **Objective:** Facilitate and maintain a secure and adequately provisioned network for data communication between libraries, the LEAN WI partner headquarters, and the LEAN WI Data Center.

Strategy:

- **Objective:** Monitor the health of the network. Log and assess usage by libraries including bandwidth utilization, equipment capacities, and other metrics as deemed relevant or necessary over time.

Strategy:

- **Objective:** Procure, implement, host, maintain, and manage shared applications and databases for core and primary technology services used by libraries.

Strategy:

Coordinator: Technology Support Lead

- **Objective:** Implement, maintain, and manage high quality technical support for core and primary technology services utilized by libraries.

Strategy:

SECTION D - MILESTONES AND PROGRESS EVALUATION (DYNAMIC)

These milestones are established to help evaluate the progress and success of implementation and operation of the LEAN WI technology strategy.

A plan for establishing and evaluating progress towards milestones will be developed by July 2020. The first progress evaluation will be complete by July 2021 and subsequent reports will be developed within the plan mentioned above. The progress evaluations will be added to this document, in Section D, immediately following the listing of milestones and incrementing this document's revision number and last date of publication.

March 31, 2020:

- Complete review of all published and solicited Wisconsin Public Library System Technology Planning documents and resources.

Actions:

- Curate published current or recent technology plans from all Wisconsin Library Systems
- Solicit updated documentation including planning documentation, notes, meeting minutes, etc from all Wisconsin Library Systems willing and able to provide such
- Establish work group of library system and member library staff from LEAN WI partner systems and interested collaborator systems to review plans and documentation for commonalities and to foster ideas for LEAN WI technology service enhancements or additions
- Task the work group with developing additional strategic objectives, primary outcomes, operational goals, operational objectives, and operational timeline milestones through 2021

June 30, 2020:

- Complete <https://leanwi.org> reference site for Appendix B

Actions:

- Work with website development team to replace placeholder website
- Complete first Milestone development process including system and member library stakeholders

July 31, 2020:

- Complete draft 2021 LEAN WI joint budget
- Begin 2021 - 2022 operational planning review

November 30, 2020:

- Complete Operational Strategy documentation and Operational Technology Plan updates

APPENDIX A – BUDGET

2020 LEAN Wisconsin Budget Summary

Draft 2 (Sept 2019)

Estimated Balance - Jan 1, 2020	\$ 88,078.00	Operating Expenses	\$ 148,221.00
IFLS Partner Total	\$ 61,813.00	Non-Operating Expenses	\$ 28,100.00
NWLS Partner Total	\$ 58,543.00	Reserve Funds	\$ 112,850.00
Other Partner Total (Placeholder)	\$ -	Total Appropriations	\$ 289,171.00
WVLS Partner Total	\$ 62,737.00		
Service Revenue	\$ -		
Prepaid Service Credit	\$ 18,000.00		

Total Funds \$ 289,171.00

Funding Sources

Appropriation Classification	Joint	Partners			Associates
		IFLS	WVLS	NWLS	
Operating	\$98,875.00	\$16,200.00	\$19,106.00	\$ 14,040.00	
Non-Operating	\$28,100.00	\$0.00	\$0.00	\$ 0.00	
Lifecycle Reserves	\$ 73,460.00	\$ 8,050.00	\$26,200.00	\$ 5,140.00	
Totals	\$ 200,435.00	\$ 24,250.00	\$45,306.00	\$ 19,180.00	
Other Revenues					
Infrastructure Services	\$ 18,000.00				
Grants					
Starting Balances*	\$ 55,346.00	\$ 4,800.00	\$24,932.00	\$ 3,000.00	
Totals	\$ 73,346.00	\$ 4,800.00	\$24,932.00	\$ 3,000.00	
Expenditures	\$ 200,435.00	\$ 24,250.00	\$45,306.00	\$ 19,180.00	
Less Other Revenues	\$ 127,089.00	\$ 19,450.00	\$20,374.00	\$ 16,180.00	
Partner Shares	\$ 42,363.00	\$ 19,450.00	\$20,374.00	\$ 16,180.00	

*Starting balance includes planned reserves plus unexpended joint and system-specific funds known as of this draft

**2020 LEAN Wisconsin
Appropriations Plan**
Draft 1.2 (Sept 2019)

Account #	Account	Appropriation	Source				Total
			Joint	IFLS	WVLS	NWLS	
6-6210	LICENSING AND SERVICES	\$136,231.00					
	Cloud Storage/Backup	AWS S3	\$150.00				\$150.00
	DNS Registration		\$300.00		\$500.00	\$100.00	\$900.00
	SSL SAN		\$1,200.00				\$1,200.00
	Collaboration Management Tools		\$15,159.00				
	Web/Video/Voice Meeting Services	gotomeeting, uberconf	\$7,500.00				\$7,500.00
	Helpdesk/Knowledgebase Service	Help Scout	\$6,000.00				\$6,000.00
	Team Messaging / File Sharing	Slack	\$720.00				\$720.00
	Team Task/Project Management	SmartSheet	\$133.00		\$356.00		\$489.00
	Security and Password Management	1Password	\$450.00				\$450.00
	Technology Management Tools		\$5,480.00				
	Resource/Asset Management						\$0.00
	Web Server Management	Server Pilot	\$240.00				\$240.00
	Booking Management Service	Lend-Items	\$240.00				\$240.00
	Mobile Device Management	JAMF Pro			\$200.00		\$200.00
	Automated Service Status Mgmt	Caché					\$0.00
	Network Monitoring / Intelligence	LibreNMS					\$0.00
	Computer Management / Remote Access	logmein	\$4,800.00				\$4,800.00
	Infrastructure Services and Licensing		\$78,460.00				
	TEACH/BadgerNet Head-End Circuits			\$3,000.00	\$3,000.00	\$3,000.00	\$9,000.00
	WisnNet Membership			\$1,500.00	\$1,500.00	\$1,500.00	\$4,500.00
	WisnNet Network Services		\$30,460.00				\$30,460.00
	WisnNet Data Center Facilities (RDC rack 1)		\$16,500.00				\$16,500.00
	CVTC Data Center Facilities (RDC rack 2 - Collaborative)		\$18,000.00				\$18,000.00
	MS CIS Licensing for RDC		\$0.00				\$0.00
	Core Services Licensing		\$34,882.00				
	System State	Faronics Deep Freeze		\$2,450.00	\$3,150.00	\$1,960.00	\$7,560.00
	Antivirus	Faronics Antivirus		\$4,200.00	\$5,250.00	\$2,660.00	\$12,110.00
	Computer Session Management	Pharos Signup		\$2,600.00	\$2,250.00	\$3,300.00	\$8,150.00
	Common Software Update Service	(Faronic CC, PDQ, other)		\$2,400.00	\$2,400.00	\$1,520.00	\$6,320.00
	Other Joint-use Licensing		\$742.00				
	Screen Recording/Screencasting software	Screencast-o-matic (10 user subscriptions)	\$120.00				\$120.00
	Visio Pro subscriptions		\$72.00				\$72.00
	PDF Editor software license	Nitro PDF Pro (perpetual)					\$0.00
	PDF Editor software annual maintenance	Nitro 'VIP' subscription (annual)		\$50.00	\$500.00		\$550.00
	Other						\$0.00
6-6250	TRAVEL	\$2,400.00					
	Local-System reimbursement for staff travel expenses						\$0.00
	LEAN WI reimbursement for joint projects and support efforts		\$2,400.00				\$2,400.00
	Other		\$0.00				\$0.00
6-6290	INSURANCE	\$2,490.00					
	Insurance for LEANWI Infrastructure (LEANWI Only)		\$990.00				\$990.00
	Insurance for Collaborative Backup/Archive Infrastructure		\$1,500.00				\$1,500.00
	Other		\$0.00				\$0.00
6-6360	MAINTENANCE	\$2,100.00					
	Cabling, IF Modules, joint-use incidentals		\$1,500.00				\$1,500.00
	Recycling		\$450.00				\$450.00
	Tools		\$150.00				\$150.00
	Other		\$0.00				\$0.00
6-6650	RESERVE FUND	\$140,950.00					
	Resource Development - Future Projects (Discretionary)		\$10,100.00				\$10,100.00
	Resource Development - Current Services		\$3,000.00				\$3,000.00
	Expansion/Enhancements		\$53,000.00				\$53,000.00
	Host Cluster Servers (2021-2027)		\$8,000.00				\$8,000.00
	Performant SAN (2024-2029) (Active Virtualization Storage)	Dell Compellant	\$12,000.00				\$12,000.00
	Large Cap SAN (2022-2029) (Cold Preservation and Archive)	Dell MD3860i	\$21,000.00				\$21,000.00
	Core switching and routers (2020/2021 - 2023)		\$12,000.00				\$12,000.00
	Lifecycle Maintenance - MS Core Infrastructure Suite Lic. (2021-		\$9,000.00				\$9,000.00
	Lifecycle Maintenance - MS Client Services Licensing	SCCM, CALS, etc.	\$11,460.00				\$11,460.00
	Lifecycle Maintenance - LWIN Core Service Licensing	Faronics DF and AV		\$8,050.00	\$6,200.00	\$5,140.00	\$19,390.00
	Capital Procurement Assistance (2020) - Recovery Reserve				\$20,000.00		\$20,000.00
	Contingency fund: D/R or suppliment unplanned projects		\$15,000.00				\$15,000.00
	Other		\$0.00				\$0.00
6-6800	CAPITAL	\$5,000.00					
	Core Switching updates						\$0.00
	Joint Laptop Program (5 x initial year)		\$5,000.00				\$5,000.00
	Core Router updates						\$0.00
	PC Purchasing Projects						\$0.00
	Other		\$0.00				\$0.00
TOTALS			\$200,435.00	\$24,250.00	\$45,306.00	\$19,180.00	\$289,171.00

APPENDIX B – REFERENCES

This appendix references the collection of documentation across LEAN WI partners which describe the entities, services, service models, and comprehensive plans the LEAN WI technology strategy is intended to serve and support. The reference resource will be implemented in 2020.

Online Documentation:

The most recent versions of all LEAN WI partners' respective planning documents can be found at:

- LEAN WI Technology Strategy Guide – [http://leanwi.org/<guide resource>/](http://leanwi.org/<guide resource>)
- System Plans – [https://leanwi.org/<system plans reference>/](https://leanwi.org/<system plans reference>)
- ILS Plans – [https://leanwi.org/<ILS plans reference>/](https://leanwi.org/<ILS plans reference>)
- Policies – [https://leanwi.org/<Policies reference>/](https://leanwi.org/<Policies reference>)
- ?Other? – [https://leanwi.org/<other resources and/or reference>/](https://leanwi.org/<other resources and/or reference>)