2021 Technology Planning Guide
Narrative for WVLS Member Libraries

Introduction:

The "2021 Technology Budget Planning Details for WVLS Member Libraries" follows the service outline on the next page. The detail sheets include the planning year, 2021, and a forecast for 2022. In previous guides a two-year forecast was presented but WVLS has worked to move the planning year out one full year ahead of the planning year's typical budgeting season. Technology Planning Guide's applicable planning year will continue to be presented approximately one full year in advance giving member libraries longer to plan for core technology services. Further, WVLS employs a "bill behind" model for the Digital Library shares meaning in any given year WVLS will pay WPLC for that year's amount and then use that amount in the subsequent year for library budget planning. This means that member libraries will have about two years to plan against Digital Library shares going forward.

Our intent remains to reshape this guide into a more accessible and dynamic form as an online web resource. The conversion of the 2020 guide into a dynamic online resource is still a target, with this 2021 guide becoming a second-year resource with 2020 available for easy comparison. We are working toward that in 2019 and 2020.

The inclusion of the Digital Library shares in the planning guide will not affect the accuracy of the budgeting details for the current planning year. The forecast year will be subject to change pending the actual amounts for the specific year determined by WPLC's partner-level formula for shares and the WVLS formula for share distribution (based on population and usage). WVLS will continue to work with the membership to determine if this satisfies longer range budgeting needs or if we can find even better ways to predict expenditures in forecast years (three years out).

2019 was another year of significant change for LEAN WI. We engaged with South Central Library System to help lead the inception of a large-scale Backup and Archival capital procurement and service development project with State-wide collaboration and will be hosting one of the two colocation sites. We welcomed another partner in Northern Waters Library Service (NWLS) and dealt with retirements and departures of a number of technology staff in both NWLS and WVLS. We were able to sustain services and have been able to begin working with NWLS to prepare for network upgrades and Active Directory join projects throughout the System.

The service outline following this introduction highlights the various core, specialize, and consultation services libraries have access to as a system membership benefit. Unless otherwise noted, these services are included in Libraries Win service membership without any additional individual/component costs.

For all technology goals, long and short-range planning, or other consultation needs please submit inquiries to the Help Desk (help@librarieswin.org) or directly to the technology consultant, Joshua Klingbeil (cio@wvls.org).

Service Outline:

Libraries Win Core Technology Services Include:

- General technical support, priority for Core Technology standards (this list)
- Local and wide area network equipment and operations management
- Computer procurement, staging, deployment, and maintenance (for supported models)[*]
- Fileserver / Filesharing hosting including robust Backup and Archiving
- System state software management (Faronics Deep Freeze)
- Antivirus software management (Faronics Antivirus)
- Computer session software management (Pharos Signup)
- Automated installation and update maintenance for various third-party software applications (PDQ Deploy)
- Email account hosting for library staff (Office 365 – Exchange Online)
- Office Desktop Licensing for library staff[**] (Office 365 Pro Plus)
- Office Desktop Licensing for public computers[**] (Office 2019 or newer)

Libraries Win Specialized Technology Services Include:

- Illuminating Our Northwoods History (ION History) Digitized Content Repository (https://ion.librarieswin.org/)
- Website hosting (including website migration assistance and website management training)
- SharePoint Teams hosting
- Custom-use virtual server hosting[**]

Libraries Win Technology Consultation Services Include:

- Long and short-range technology plan review, assessment, and/or development
- Computer, software licensing, and other technology-related lifecycle planning and budgeting guidance
- Grant management assistance
- Collaboration facilitation
- Technology infrastructure improvement projects (including new building or major renovation projects)

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[*]   Libraries will be invoiced for the direct cost of computers procured through WVLS.

[**]   Additional costs may apply. Appropriate Office Desktop licensing for non-staff use (eg public computers) must be maintained by the library. Custom-use virtual server hosting may incur a capacity recovery cost, dependent on project status and capacity provisioned.

2021 Technology Budget Planning Details for WVLS Member Libraries

WVLS Member Libraries	PCs[1]	Libraries Win - Membership Services				Digital Library[7]	2021 Total Share	Previous Share (2020)	Core Services Change from 2020[5]	Other: TEACH / BadgerNet[4]
		Base	+ PC[2]	New Integrated Services[3]	2021 Totals					
Abbotsford Public Library	11	$ 1,350.00	$ 330.00	$ -	$ 1,680.00	$ 596.87	$ 2,276.87	$ 2,191.18	$ 85.69	$ 1,200.00
Antigo Public Library	40	$ 4,500.00	$ 1,200.00	$ -	$ 5,700.00	$ 3,983.06	$ 9,683.06	$ 9,388.01	$ 295.05	$ 4,800.00
Colby Public Library	11	$ 1,350.00	$ 330.00	$ -	$ 1,680.00	$ 1,127.53	$ 2,807.53	$ 2,712.95	$ 94.58	$ 1,200.00
Crandon Public Library	10	$ 1,350.00	$ 300.00	$ -	$ 1,650.00	$ 1,182.65	$ 2,832.65	$ 2,681.27	$ 151.38	$ 1,200.00
Dorchester Public Library	8	$ 1,350.00	$ 240.00	$ -	$ 1,590.00	$ 248.30	$ 1,838.30	$ 1,803.93	$ 34.38	$ 1,200.00
Edith Evans Memorial Library (Laona)	9	$ 1,350.00	$ 270.00	$ -	$ 1,620.00	$ 242.41	$ 1,862.41	$ 1,835.25	$ 27.16	$ 1,200.00
Edward U. Demmer Memorial Library (Three Lakes)	14	$ 1,350.00	$ 420.00	$ -	$ 1,770.00	$ 749.23	$ 2,519.23	$ 2,465.62	$ 53.61	$ 1,200.00
Frances L. Simek Memorial Library (Medford)	22	$ 1,500.00	$ 660.00	$ -	$ 2,160.00	$ 2,682.56	$ 4,842.56	$ 4,808.23	$ 34.33	$ 1,200.00
Granton Community Library	6	$ 1,350.00	$ 180.00	$ -	$ 1,530.00	$ 195.18	$ 1,725.18	$ 1,674.91	$ 50.27	$ -
Greenwood Public Library	8	$ 1,350.00	$ 240.00	$ -	$ 1,590.00	$ 705.59	$ 2,295.59	$ 2,213.77	$ 81.82	$ 1,200.00
Jean M. Thomsen Memorial Library (Stetsonville)	9	$ 1,350.00	$ 270.00	$ -	$ 1,620.00	$ 151.17	$ 1,771.17	$ 1,742.58	$ 28.59	$ 1,200.00
Loyal Public Library	9	$ 1,350.00	$ 270.00	$ -	$ 1,620.00	$ 458.07	$ 2,078.07	$ 2,025.61	$ 52.46	$ 1,200.00
Marathon County Public Library[6]	150	$ 6,900.00	(port rate - all locations)		$ 6,900.00	$ 28,640.60	$ 35,540.60	$ 35,867.16	$ (326.56)	$ -
Minocqua Public Library	32	$ 1,500.00	$ 960.00	$ -	$ 2,460.00	$ 3,627.05	$ 6,087.05	$ 5,803.90	$ 283.15	$ 1,200.00
Neillsville Public Library	12	$ 1,350.00	$ 360.00	$ -	$ 1,710.00	$ 1,040.94	$ 2,750.94	$ 2,733.56	$ 17.38	$ 1,200.00
Owen Public Library	7	$ 1,350.00	$ 210.00	$ -	$ 1,560.00	$ 477.19	$ 2,037.19	$ 2,066.02	$ (28.83)	$ 1,200.00
Rhinelander District Library	40	$ 1,650.00	$ 1,200.00	$ -	$ 2,850.00	$ 5,453.19	$ 8,303.19	$ 7,905.05	$ 398.14	$ 1,200.00
Rib Lake Public Library	12	$ 1,350.00	$ 360.00	$ -	$ 1,710.00	$ 384.20	$ 2,094.20	$ 2,039.36	$ 54.84	$ 1,200.00
T.B. Scott Free Library (Merrill)	44	$ 1,650.00	$ 1,320.00	$ -	$ 2,970.00	$ 4,643.43	$ 7,613.43	$ 7,406.97	$ 206.47	$ 1,200.00
Thorp Public Library	9	$ 1,350.00	$ 270.00	$ -	$ 1,620.00	$ 630.97	$ 2,250.97	$ 2,254.10	$ (3.13)	$ 1,200.00
Tomahawk Public Library	16	$ 1,350.00	$ 480.00	$ -	$ 1,830.00	$ 2,085.09	$ 3,915.09	$ 3,788.78	$ 126.31	$ 1,200.00
Wabeno	7	$ 1,350.00	$ 210.00	$ -	$ 1,560.00	$ 147.80	$ 1,707.80	$ 1,669.56	$ 38.24	$ 1,200.00
Westboro Public Library	9	$ 1,350.00	$ 270.00	$ -	$ 1,620.00	$ 85.47	$ 1,705.47	$ 1,662.68	$ 42.79	$ 1,200.00
Western Taylor County Public Library	9	$ 1,350.00	$ 270.00	$ -	$ 1,620.00	$ 286.38	$ 1,906.38	$ 1,915.91	$ (9.53)	$ 1,200.00
Withee Public Library	7	$ 1,350.00	$ 210.00	$ -	$ 1,560.00	$ 218.47	$ 1,778.47	$ 1,737.74	$ 40.73	$ 1,200.00

1 Estimated active "traditional" staff or patron computers only. Counts are for planning purposes, actual number of active computers used for invoicing.

2 Utilized to support equitable sharing of per-computer related expenses (eg Antivirus, DeepFreeze, LogMeIn Licensing).

3 Integrated services services introduced in 2018, including lifecycle management for routers, switches, and managed WiFi are now included in the Base. No new integrated services are expressly planned for 2021. This column is intended to highlight the expansion of services to meet needs/demands for a given year and will be merged into the base column in subsequent planning guides. MCPL works in partnership with the City-County IT Commission (CCITC) to self-manage all HQ and branch network routing and switching equipment and managed WiFi, operating within a Marathon County focused shared services stack (with CCITC, Northcentral Technical College, and other educational and governmental organizations).

4 Starting 2020, TEACH will be sending invoices directly to libraries. This column will be removed in future plans, and a reminder fixed in the planning narrative. MCPL opted out of BadgerNet services, utilizing cable broadband internet services for branch interconnects, Wausau CAN with a WVLS-affiliate WiscNet transit connection, and direct port attachment to WVLS WAN. Granton has previously expressed an interest in establishing its own BadgerNet circuit, but for accuracy in planning against current operations, its BadgerNet cost estimate has been zero'd out.

[5] Reflects increase in per computer component of $5 to cover increased cost of continuation for current licensing and maintenance forward on grant funded server access and client management licensing. Differences in Wisconsin Digital Library cost shares from the previous year are reflected. Adjustments to estimated computer counts may be reflected.

[6] MCPL receives a single, discounted port rate for all branches as it self-manages its WAN interconnections. Shared license costs are built in (also discounted due to lower relative usage).

[7] WVLS manages the Digital Library Shares through WVLS Technology Services to simplify passthroughs. A "bill behind" model is used for the Digital Library shares. 2018 was a "bridge year" with Digital Libraries Shares tied to the 2017 WPLC cost share. 2019 utilized the 2018 WPLC cost share which includes our portion of the buying pool increase. 2020 utilized the 2019 WPLC cost share and 2021 utilizes the 2020 cost share.

NOTE: This component remains variable from year to year and is thus subject to change.

NOTE: It is recommended that libraries budget for approximately 1/n (where 'n' is the supported product life in years) of the replacement cost of any capital equpiment. For technology equipment, 3 or 5 years should be a general default for anything with service agreements or warranties less than 3-5 years. WVLS has traditionally supported specific Dell Computers with 5 year comprehensive warranties, and will likely continue to do so indefinitely within the new LEAN WI partnership and Libraries Win technology services suite. We recommend budgeting $700 per desktop computer; $1000 per laptop; and no longer recommend local procurement of physical servers. One strategy is to appropriate 1/5 of the cost for total replacement of all computers each year until a reserve fund has been established which can cover the cost of at least 80% of all equipment. To help save on costs, replacements can be pushed beyond five years but we recommend maintaining a 100% cost-of-replacement reserve in those cases. Another strategy is to work toward a long term plan of replacing 1/5 of the library's computers in any given year. This helps establish a consistent appropriation each year. Except for MCPL which self-manages, and Granton Community Library which shares resources with its K12 cohabitant, member libraries no longer need to budget seperately for network router, network switching, or Wireless Access Point equipment.

2021 Technology Budget Planning Details - Digital Library Shares

WVLS Member Libraries	2018 Usage	%	2018 Extended County Population*	%	Avg % of Usage + Population	2020 Member Shares	Est. Cost per Unit of Service	Ratio of Usage to Population
Abbotsford Public Library	2,012	0.81%	3,324	1.17%	0.994%	$ 596.87	$ 0.30	60.5%
Antigo Public Library	15,219	6.15%	20,131	7.11%	6.634%	$ 3,983.06	$ 0.26	75.6%
Colby Community Library	2,789	1.13%	7,437	2.63%	1.878%	$ 1,127.53	$ 0.40	37.5%
Crandon Public Library	4,256	1.72%	6,278	2.22%	1.970%	$ 1,182.65	$ 0.28	67.8%
Dorchester Public Library	607	0.25%	1,646	0.58%	0.414%	$ 248.30	$ 0.41	36.9%
Edith Evans Memorial Library (Laona)	624	0.25%	1,571	0.56%	0.404%	$ 242.41	$ 0.39	39.7%
Edward U. Demmer Memorial Library (Three Lakes)	4,010	1.62%	2,474	0.87%	1.248%	$ 749.23	$ 0.19	162.1%
Frances Simek Memorial Library (Medford)	9,001	3.64%	14,987	5.30%	4.468%	$ 2,682.56	$ 0.30	60.1%
Granton Community Library	130	0.05%	1,691	0.60%	0.325%	$ 195.18	$ 1.50	7.7%
Greenwood Public Library	2,732	1.10%	3,525	1.25%	1.175%	$ 705.59	$ 0.26	77.5%
Jean M. Thomsen Memorial Library (Stetsonville)	270	0.11%	1,116	0.39%	0.252%	$ 151.17	$ 0.56	24.2%
Loyal Public Library	1,330	0.54%	2,796	0.99%	0.763%	$ 458.07	$ 0.34	47.6%
Marathon County Public Library	120,805	48.85%	131,743	46.55%	47.700%	$ 28,640.60	$ 0.24	91.7%
Minocqua Public Library	19,541	7.90%	11,830	4.18%	6.041%	$ 3,627.05	$ 0.19	165.2%
Neillsville Public Library	2,455	0.99%	7,003	2.47%	1.734%	$ 1,040.94	$ 0.42	35.1%
Owen Public Library	1,595	0.64%	2,673	0.94%	0.795%	$ 477.19	$ 0.30	59.7%
Rhinelander District Library	25,632	10.36%	22,074	7.80%	9.082%	$ 5,453.19	$ 0.21	116.1%
Rib Lake Public Library	1,661	0.67%	1,721	0.61%	0.640%	$ 384.20	$ 0.23	96.5%
T.B. Scott Free Library (Merrill)	20,106	8.13%	20,764	7.34%	7.733%	$ 4,643.43	$ 0.23	96.8%
Thorp Public Library	1,377	0.56%	4,372	1.54%	1.051%	$ 630.97	$ 0.46	31.5%
Tomahawk Public Library	10,105	4.09%	8,092	2.86%	3.473%	$ 2,085.09	$ 0.21	124.9%
Wabeno Public Library	15	0.01%	1,376	0.49%	0.246%	$ 147.80	$ 9.85	1.1%
Westboro Public Library	67	0.03%	729	0.26%	0.142%	$ 85.47	$ 1.28	9.2%
Western Taylor Co Public Library (Gilman)	447	0.18%	2,188	0.77%	0.477%	$ 286.38	$ 0.64	20.4%
Withee Public Library	536	0.22%	1,446	0.51%	0.364%	$ 218.47	$ 0.41	37.1%
	247322		282987			$ 60,043.40	$ 0.24	
							Average	

2020 WPLC Buying Pool Share $ 60,043.40

* From most recent available data published by Wisconsin DPI (https://dpi.wi.gov/pld/data-reports/service-data) at time of adoption

2022 Technology Budget Planning Preview for WVLS Member Libraries

| WVLS Member Libraries | PCs[1] | Libraries Win - Membership Services | | | | Digital Library[6] | 2022 Total Share | Previous Share (2021) | Core Services Change from 2021[4] |
		Base	+ PC[2]	New Integrated Services[3]	2022 Totals				
Abbotsford Public Library	11	$ 1,350.00	$ 330.00	$ -	$ 1,680.00	$ 596.87	$ 2,276.87	$ 2,276.87	$ -
Antigo Public Library	40	$ 4,500.00	$ 1,200.00	$ -	$ 5,700.00	$ 3,983.06	$ 9,683.06	$ 9,683.06	$ -
Colby Public Library	11	$ 1,350.00	$ 330.00	$ -	$ 1,680.00	$ 1,127.53	$ 2,807.53	$ 2,807.53	$ -
Crandon Public Library	10	$ 1,350.00	$ 300.00	$ -	$ 1,650.00	$ 1,182.65	$ 2,832.65	$ 2,832.65	$ -
Dorchester Public Library	8	$ 1,350.00	$ 240.00	$ -	$ 1,590.00	$ 248.30	$ 1,838.30	$ 1,838.30	$ -
Edith Evans Memorial Library (Laona)	9	$ 1,350.00	$ 270.00	$ -	$ 1,620.00	$ 242.41	$ 1,862.41	$ 1,862.41	$ -
Edward U. Demmer Memorial Library (Three Lakes)	14	$ 1,350.00	$ 420.00	$ -	$ 1,770.00	$ 749.23	$ 2,519.23	$ 2,519.23	$ -
Frances L. Simek Memorial Library (Medford)	22	$ 1,500.00	$ 660.00	$ -	$ 2,160.00	$ 2,682.56	$ 4,842.56	$ 4,842.56	$ -
Granton Community Library	6	$ 1,350.00	$ 180.00	$ -	$ 1,530.00	$ 195.18	$ 1,725.18	$ 1,725.18	$ -
Greenwood Public Library	8	$ 1,350.00	$ 240.00	$ -	$ 1,590.00	$ 705.59	$ 2,295.59	$ 2,295.59	$ -
Jean M. Thomsen Memorial Library (Stetsonville)	9	$ 1,350.00	$ 270.00	$ -	$ 1,620.00	$ 151.17	$ 1,771.17	$ 1,771.17	$ -
Loyal Public Library	9	$ 1,350.00	$ 270.00	$ -	$ 1,620.00	$ 458.07	$ 2,078.07	$ 2,078.07	$ -
Marathon County Public Library[5]	150	$ 6,900.00	(port rate - all locations)		$ 6,900.00	$ 28,640.60	$ 35,540.60	$ 35,540.60	
Minocqua Public Library	32	$ 1,500.00	$ 960.00	$ -	$ 2,460.00	$ 3,627.05	$ 6,087.05	$ 6,087.05	$ -
Neillsville Public Library	12	$ 1,350.00	$ 360.00	$ -	$ 1,710.00	$ 1,040.94	$ 2,750.94	$ 2,750.94	$ -
Owen Public Library	7	$ 1,350.00	$ 210.00	$ -	$ 1,560.00	$ 477.19	$ 2,037.19	$ 2,037.19	$ -
Rhinelander District Library	40	$ 1,650.00	$ 1,200.00	$ -	$ 2,850.00	$ 5,453.19	$ 8,303.19	$ 8,303.19	$ -
Rib Lake Public Library	12	$ 1,350.00	$ 360.00	$ -	$ 1,710.00	$ 384.20	$ 2,094.20	$ 2,094.20	$ -
T.B. Scott Free Library (Merrill)	44	$ 1,650.00	$ 1,320.00	$ -	$ 2,970.00	$ 4,643.43	$ 7,613.43	$ 7,613.43	$ -
Thorp Public Library	9	$ 1,350.00	$ 270.00	$ -	$ 1,620.00	$ 630.97	$ 2,250.97	$ 2,250.97	$ -
Tomahawk Public Library	16	$ 1,350.00	$ 480.00	$ -	$ 1,830.00	$ 2,085.09	$ 3,915.09	$ 3,915.09	$ -
Wabeno	7	$ 1,350.00	$ 210.00	$ -	$ 1,560.00	$ 147.80	$ 1,707.80	$ 1,707.80	$ -
Westboro Public Library	9	$ 1,350.00	$ 270.00	$ -	$ 1,620.00	$ 85.47	$ 1,705.47	$ 1,705.47	$ -
Western Taylor County Public Library	9	$ 1,350.00	$ 270.00	$ -	$ 1,620.00	$ 286.38	$ 1,906.38	$ 1,906.38	$ -
Withee Public Library	7	$ 1,350.00	$ 210.00	$ -	$ 1,560.00	$ 218.47	$ 1,778.47	$ 1,778.47	$ -

[1] Estimated active "traditional" staff or patron computers only. Counts are for planning purposes, actual number of active computers used for invoicing.

[2] Utilized to support equitable sharing of per-computer related expenses (eg Antivirus, DeepFreeze, LogMeIn Licensing).

[3] Integrated services services introduced in 2018, including lifecycle management for routers, switches, and managed WiFi are now included in the Base. No new integrated services are expressly planned for 2022. This column is intended to highlight the expansion of services to meet needs/demands for a given year and will be merged into the base column in subsequent planning guides. MCPL works in partnership with the City-County IT Commission (CCITC) to self-manage all HQ and branch network routing and switching equipment and managed WiFi, operating within a Marathon County focused shared services stack (with CCITC, Northcentral Technical College, and other educational and governmental organizations).

[4] No adjustments to core or per computer costs are expected during 2022 at the draft of this preview (2019). This column will reflect any adjustments made to the final draft of the 2022 planning gude in 2020. Differences in Wisconsin Digital Library cost shares from the previous year will be reflected in the final draft. Adjustments to estimated computer counts may be reflected.

[5] MCPL receives a single, discounted port rate for all branches as it self-manages its WAN interconnections. Shared license costs are built in (also discounted due to lower relative usage).

[6] WVLS manages the Digital Library Shares through WVLS Technology Services to simplify passthroughs. A "bill behind" model is used for the Digital Library shares. 2018 was a "bridge year" with Digital Libraries Shares tied to the 2017 WPLC cost share. 2019 utilized the 2018 WPLC cost share which includes our portion of the buying pool increase. 2021 utilized the 2020 WPLC cost share and 2022 will utilize the 2021 cost share.

NOTE: This component remains variable from year to year and is thus subject to change.

NOTE: It is recommended that libraries budget for approximately 1/n (where 'n' is the supported product life in years) of the replacement cost of any capital equipment. For technology equipment, 3 or 5 years should be a general default for anything with service agreements or warranties less than 3-5 years. WVLS has traditionally supported specific Dell Computers with 5 year comprehensive warranties, and will likely continue to do so indefinitely within the new LEAN WI partnership and Libraries Win technology services suite. We recommend budgeting $700 per desktop computer; $1000 per laptop; and no longer recommend local procurement of physical servers. One strategy is to appropriate 1/5 of the cost for total replacement of all computers each year until a reserve fund has been established which can cover the cost of at least 80% of all equipment. To help save on costs, replacements can be pushed beyond five years but we recommend maintaining a 100% cost-of-replacement reserve in those cases. Another strategy is to work toward a long term plan of replacing 1/5 of the library's computers in any given year. This helps establish a consistent appropriation each year. Except for MCPL which self-manages, and Granton Community Library which shares resources with its K12 cohabitant, member libraries no longer need to budget seperately for network router, network switching, or Wireless Access Point equipment.

Revision Log:

At times, the budget planning guide may need to be revised to account for changes in systemwide circumstances or to correct errors in labeling, formulas, etc. Revisions to the most recently adopted version leading to significant changes in share amounts will result in the revision being presented to LAC if feasible and to the WVLS Board for review and approval. Edits resulting in more than a 2% difference in the total shares or in more than a 4% increase in amount any individual member share will be considered significant.

Revision 1.1:

- Fixed header on Digital Library Shares page to read:
   "2021 Technology Budget Planning Details - Digital Library Shares"
- Fixed Column header for population to read:
   "2018 Extended County Population"*
- Added note for starred item:
   "From most recent available data published by Wisconsin DPI (https://dpi.wi.gov/pld/data-reports/service-data) at time of adoption"
- Fixed formulas in Digital Library shares columns on 2021 Planning Details page and 2022 Planning Preview page to connect to 2020 Digital Library Shares data which were still referencing 2019 data (though the 2020 Digital Library Shares page was accurate).
- Adopted August 2020

Revision 1:

- Adopted November 2019