



William P. Faust Public Library of Westland 2010-2014 Technology Plan

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1. Introduction

The goal of the Westland Library Technology Plan is to detail how technology can assist the Library in fulfilling its stated mission (*Section 1.1*). The overall direction of Library technology is influenced heavily by the needs, wishes, and suggestions of Westland residents and Library staff, as well as by current library technology standards and trends.

There is no such thing as a one-time technology purchase. In today’s fast-paced technical climate, an item is obsolete the moment it is purchased. Additionally, all technology requires care, maintenance, and review. Westland Library’s technology offerings need to stay in constant motion to keep up with the varied needs of the community, staff, and the increasing demand for modern technology access. The current state of Westland Library technology is adequate, but not optimal. This plan aims to help the library achieve an optimal technology rotation and maintain it.

1.1 Library Mission and Values

1.1.1 Library Mission

Our mission is to promote education and lifelong learning, to encourage personal enrichment, and to support a vibrant quality of life within our community.

1.1.2 Library Values

Our values guide our decision-making and our service approach.

- **Excellent Service:** We commit to excellent, respectful service for all patrons. Our accessible, friendly staff assists patrons in locating accurate information and offers educational programs for all ages. We are responsible stewards of community resources.
- **Equal Access:** We provide free and open access to a wide variety of resources and services. Our materials include both classic literary content and current popular works, meeting the wide range of interests of our community members.
- **Partnerships to Build Community:** What matters to our community matters to the library. We believe that it is through effective partnerships with other local resources that we strengthen our community.
- **Creating Connections:** We believe in the value of connection. The library creates an environment that connects the individual to information and knowledge and to other members of the community. We strive to create a warm and welcoming experience for all users.

1.2 Library Background

The William P. Faust Public Library of Westland serves the community of Westland, a community in Southeastern Michigan with a population of 86,602. The building opened in November 1996 and is located at 6123 Central City Pkwy, Westland, MI 48185.

The library is named in honor of the late state senator William P. Faust, an avid reader and library advocate who was instrumental in obtaining state funds for the Library.

The library was designed by TMP Associates, Inc. and is 25,400 net square feet (33,450 gross square feet). It was modeled after the Carnegie libraries of the early 1900's, which traditionally feature a grand hall and a fireplace.

The Westland Public Library now has 174,967 items and 77,920 registered library card holders. The library averages 493,000 checkouts per year. The director of the library is Cheryl Napsha.

The Library has rich a tradition of providing technology access and items to patrons. Currently the library provides CDs, Playaways, videos, DVDs, and software through standard public lending practices. Basic Internet and productivity software access is provided along with electronic materials accessed through online subscription databases. The library holds digitized archives of the Westland Observer back to the year 2000, and microfiche for older years of circulation. Patrons without home Internet access can enjoy Internet usage on any of the 37 Internet and Productivity Stations, or free Library Wi-Fi. Patrons can also sign up for free dial-up Internet access for use at home, a service co-sponsored by the library.

The library hosts a number of adult programs including computer classes. Computer classes range from basic computer and Internet use, to office productivity software, to more advanced topics, such as PC troubleshooting. Special computer topics are also covered quarterly and during summer programs.

1.3 Library Goals

The Technology Plan is drafted with the following Westland Library goals in mind:

- **Establish the library as a social and cultural community gathering place.** By virtue of both its facility and the programs it provides, the library is uniquely positioned to serve as both a social and cultural gathering place for the city of Westland. Vibrant communities provide welcoming gathering places for diverse cultural activities. We seek to support our community by positioning the library as a cultural hub in Westland and making it a key destination for community activities.
- **Engage the community through outreach and targeted marketing.** An internationally noted library consultant recommended that we work to “bring the library to the people.” We will increase our outreach services to the diverse groups of Westland residents. It is not enough to offer great programs and services. We must work to keep the public informed of our offerings. We will develop a marketing plan to consistently share information with the community about our services and programs. Marketing will be done creatively, using existing resources whenever possible.
- **Support the education and economic development priorities of Westland.** Our partnership with the city is a critical component of our approach to serving the community. We believe that we are uniquely positioned to support the city’s priorities for education and economic development. Our initial focus is on education, specifically on expanding library services in the form of adult and children’s programming. In the second phase of the plan, programs will be developed to address the needs of entrepreneurs and people seeking employment. We will support our community members in their business and employment efforts.
- **Improve service and access for patrons.** The library exists to serve our community. We will reevaluate and revise our service delivery model to make more efficient use of staff resources and to allow patrons more opportunity for successful self-service. Our information systems must be updated, ensuring that staff members have the tools they need to do their jobs effectively and efficiently, and that the public has improved access to computer and on-line resources. We will improve public service by creating user-friendly library processes, improving signage, and maintaining increased hours. We will continue to improve upon our customer service, striving to make the library a welcoming, accessible place for all.
- **Sustain viable infrastructure for services.** The library building and grounds are a unique and valued resource in our community. During the course of this plan, we will assess what capital investments will be needed to maintain our building, how we can better use our grounds (including the pavilion) and whether the library needs more space to effectively serve the community. As part of this process, we will consider strong collaborations with the city and with city departments. Technology support for both staff and patrons will also be a focus of our plan. We will look at what internal space revisions and technology requirements will be needed to support changes in the ways we deliver service to our patrons.

- **Generate necessary resources.** The staff and Board of the library are committed to responsible use of all available resources. When these goals require funding beyond our current resources, we will seek creative ways to fund them. Again, our partnership with the city and local businesses will be critical in mapping our future and funding it.

1.4 Library Challenges

A Technology Plan not only attempts to address the values and goals of the Library. A Technology Plan also focuses on the challenges that will be faced throughout the course of the plan. Some of the challenges facing the Library today include:

- Keeping up with the rapid technological changes that affect teaching, learning, and research
- Increased demand from patrons to access online items and new publishing media
- Leveraging and capitalizing on the huge increase in digital information
- Skyrocketing prices for research and technology materials that outpace the rate of inflation
- A national and local climate of financial recession and the budget cuts associated with recession
- An outdated and inefficient building infrastructure that accounts for half of the total budget

2. Technology Highlights

2.1 Westland Library Technology Committee

The Westland Library Committee was formed in March 2009. Its members cover each major department of the library to insure that all public and staff technology needs are addressed and met. Meetings are informally held quarterly.

Members:

Gary Oke - Technology Coordinator
 Cheryl Napsha – Library Director
 Kristy Cooper – Webmaster, Reference Department
 Susan Hanson – Catalog Specialist, Technology Reference Librarian
 Cari Fry – Children’s Department
 David Wasson – Circulation Department

2.2 Technology Highlights from 2008 – 2009

2008:

- **Jan:** Network Administrator, Lucian Poenaru, resigns from the Library
- **Feb:** The Library Network (TLN) picks up temporary support of Westland Library technology
- **Summer:** 42 Public Access computers, including Internet workstations and Catalog computers are deployed. Computers feature 2GB of memory (to insure a longer lifespan), the latest Internet browser, and current office suite (Office 2007) based on patron needs.
- **Summer:** New Public Access management server installed by TLN, along with onsite tape backup
- **Nov:** Staff Upgrade: Computer Assistant position created; aids public with basic computing tasks

2009:

- **Feb:** Technology Coordinator, Gary Oke, hired to support the Library's technology.
- **Feb:** Staff Upgrade - 20 new staff computers deployed (upgraded from < 2Ghz CPUs and 256mb RAM to Dual Core systems with 2GB of RAM).
- **Feb:** Staff Upgrade - New "Staff Shared Server" featuring shared directory access and a basic Knowledge Base is put into production
- **March:** Infrastructure Update: development of off-hours technology maintenance schedule.
- **March:** Staff Update - formation of the Westland Library Technology Committee.
- **March:** Staff Upgrade - Initial setup and training on new 21-camera DVR security system
- **April:** Staff Update - First staff-training month: topics include using the shared server and Word/Office 2007
- **April:** Infrastructure Upgrade - Migration from XO Communications to Merit Networks for web hosting and e-mail access. New library domain name, www.westlandlibrary.org, is activated.
- **April:** Staff Upgrade - 12 remaining new staff computers deployed
- **April:** Public Upgrade - Per patron requests, all web plug-ins updated to latest version on the public access computers. Plugs-in included: Adobe Flash, Adobe Shockwave, Adobe Reader, Apple QuickTime, Real Player, Sun Java. The latest plugs-in will provide the best compatibility with modern web sites.
- **May:** Infrastructure Upgrade - divided power block in the Technology Workroom (Server Room) to better balance the power loads on the server stack (9 servers in all).
- **May:** Public Upgrade - upgrade of Children's Gaming PC (recycled the 6 best PCs from staff upgrades).
- **May:** Infrastructure Upgrade - modification of all library systems for new longer hours of operation
- **June:** Public Upgrade – Virtual Reference desk added to www.westlandlibrary.org
- **June:** Infrastructure Upgrade - migrated all library computers from expired AVG and F-secure antivirus licenses to Symantec Endpoint
- **July:** Public Upgrade - Wireless printing setup in meeting rooms A, B, & C for use with computer classes and the Job-Seekers Lab
- **July:** Infrastructure Upgrade - migration from XO.com (T1 line 1.5mbps copper) to Merit/AT&T Opt-E-Man circuit (5M synchronous fiber). Burst speeds are allowed near 7M. This improvement increases the overall bandwidth available to staff and patrons. Wireless users are sectioned off and on a shared cable connection to help better balance bandwidth needs.
- **July:** Infrastructure Upgrade – TLN router installed to manage connection to Merit. Network layout and infrastructure redesigned for new IP address. Changes made were transparent to end users.
- **July:** Staff Upgrade – new electronic time clock installed.
- **August:** Public Upgrade – debut of Basic PC Maintenance lecture/course, the first upper level computer course at the library.
- **September:** Public Upgrade - development starts on new version of library web site
- **September:** Public Upgrade - Westland Observer archives 2000-2008 made available digitally from all public Internet workstations. Older editions are still available via micro-fiche.
- **September:** Public Upgrade – deployment of new profile on Internet and Productivity workstations. Computers now have 20 available applications and links on the desktop. New features include access to the Westland Observer archives, the ability to burn CDs and watch movies, and City of Westland cross-promotional links (City, Nixel, RecycleBank, Census).

- **September:** Public Update – overhaul of SAM software, the public access computer management software. Working with vendor, we cleaned up several issues that cause commonly re-occurring logon and access problems for patrons.
- **October:** Staff Upgrade - Migrated telephone system from TDS to AT&T
- **October:** Resource Sharing – Westland holds secretary officer position on the TLN Technology Committee
- **October:** Patron Upgrade - Dial-up and Wireless updated for Windows 7
- **November:** Infrastructure Upgrade – New FASTER color printers for both public and staff use.
- **November:** Infrastructure Upgrade – Printer consumables and monitoring deal with Image One and HP. *Saves 20-40% on HP OEM cartridges, and 40-60% on Brother compatible cartridges.*
- **November:** Public Update – library expands Internet presence to Wikipedia, to go along with existing Facebook and Twitter feeds.

3. Technology Status Reports

3.1 Current Status and Inventory

STATUS (as of December 2009):

The current status of the technology at the Westland Library can be described as “**Adequate, but not Optimal**”. We have the basic systems common to area libraries. Ease of use of these systems is relatively poor, although stability is much improved over 2008. Goals for the future should not only focus on extending functionality and features, but should facilitate easier technology interactions. Overall stability and power issues should be addressed as well.

INVENTORY (as of December 2009):

3.1.1 Public Computers

- | | |
|----|--|
| 34 | Full Public-access Internet and Productivity workstations (1 hour access sessions; 3 hours max) |
| 3 | “Quick Connect” Internet and Productivity workstations (15 minute access)
<i>Features of Internet and Productivity Workstations:
Dell OptiPlex 755 USFF, Intel Core 2 Duo Processors, 2GB of memory (RAM) for multi-tasking
Windows XP Professional SP3, Internet Explorer 7, Microsoft Office 2007 SP2</i> |
| 7 | Catalog PCs (2 Children’s, 4 Central, 1 South) |
| 2 | Self-Checkout terminals (Custom/“White Box”) |
| 6 | Children’s Gaming PCs (rotating 8-9 games per computer)
<i>Features of Children’s Gaming PCs:
Dell OptiPlex GX520, Intel Pentium 4 3Ghz Processors, 1GB of memory for running gaming titles
Windows XP Professional SP3, DirectX 9c, Flash 10, QuickTime 7, Java RE 6</i> |
| 9 | Group Training Laptops (Computer Training Lab) – Dell Latitude D820 (Windows XP) |
| 3 | Individual Training Laptops (Specialized One-on-One) – Dell Latitude D820 (XP, Vista, Win 7) |

3.1.2 Infrastructure Computers

- 1 Primary Domain Controller server: (XPC “White Box”; Intel Core 2 Duo; MS 2003)
- 1 Public “Profile” server: (Dell PowerEdge 1800; Intel Xeon; MS 2003)
- 1 Horizon 7.3.4 Catalog/Patron Database Server: (“White Box”; Intel Xenon; RAID 1; MS 2000)
- 1 Horizon Information Portal 3.08, or “HIP” Online Catalog: (“White Box”; Intel Xeon ; RAID 1; MS 2000)
- 1 Horizon “Day End” report PC (“White Box”; Intel Celeron; Windows XP)
- 1 Self-check management PC (“White Box”; Intel Celeron; Windows XP)
- 1 www.westlandlibrary.org Web Server: (“White Box”; Intel Pentium 4; MS 2003)
- 1 Smart Access Manager 8.5, or SAM Server: (XPC “White Box; Intel Pentium 4 ; MS 2003)
- 1 Staff File Server or “Shared Server”: (White Box; Intel Core 2 Quad; MS 2003)
- 2 OpenEye Security DVRs: (OpenEye E120, 16 Camera Capacity per box; Linux OS)
- 1 HVAC Control Computer (Digital Venturis 466; Intel 486; Windows 3.1; *unsupported*)

3.1.3 Staff Computers

- 34 Individually Assigned and Shared-Access staff computers
 - 32 x Dell OptiPlex 760, Intel Core 2 Duo, 2GB of memory (RAM); *note: new in 2009*
 - 1 x Dell Precision 380 - serves as Graphics Workstation / Scanning PC
 - 1 x Dell OptiPlex GX520 (1GB RAM) – serves as Dispatch / Check-in workstation
- 7 Specialized and/or spare computers
 - 1 x Dell OptiPlex GX520 (1GB RAM) – serves as parts backup for Dispatch/Children’s Game PCs
 - 2 x White Box spare parts PCs – for backup of Day End, Self-check, and Children’s Catalog PCs
 - 1 x Dell Dimension 3000 (1GB RAM) – serves as Public Profile testing PC
 - 1 x White Box – serves a specialized system testing unit
 - 2 x XPC “White Box” spares – for server spares / future use

3.1.4 Network Infrastructure

- 1 ISP #1: Merit Networks via AT&T Opt-E-Man Circuit (5 M up/down synchronous)
Note: utilized by Staff and the Public Internet and Productivity workstations
- 1 ISP #2 : Comcast (16 Mbps burst down / 1 Mbps up) for wireless clients
Note: separated from internal staff network for security. We cannot control what software patrons have on their own laptops.
- 1 Firewall: Cisco PIX 515E Hardware-based
- 1 Gateway/Router: Cisco 3560 (provided by TLN as part of WAN connectivity)
- 4 Managed Switches: Cisco 2900XL
- 1 8e6 R3000 Enterprise Filter
- 15 Unmanaged multi-port switches and hubs (3Com and Linksys)
- 80 CAT 5 in-wall wiring runs; approximately 95% utilized

3.1.5 Monitors and Peripherals

6	20" LCD Monitors (Director, Children's staff, 4 Public/Catalog PCs)
22	19" LCD Monitors (16 assigned to staff; 6 for Children's gaming PCs)
14	17" LCD Monitors (11 assigned to staff; 2 for security system)
12	15" LCD Monitors (6 Catalog PCs, 3 15-minute Stations, SAM Sign-up, Dispatch, Day-End)
2	HP LaserJet 4700 Color LaserJet printers (1 public; 1 staff)
2	HP LaserJet 4250 Black & White LaserJet printers (1 public; 1 staff)
1	Dell 3000cn Color Laser (staff/director)
1	Minolta MagiColor 3100 (staff back-up)
12	Brother Black & White Laser Printers (staff personal and shared)
1	Brother Multi-Function B&W Laser Printer (reception)
9	Epson Receipt Printers (staff)
1	Epson Photo Printer (staff)
1	Epson Photo Scanner (staff)
18	Hand/Barcode Scanners

3.1.6 General Software

- Integrated Library System (ILS) – SirsiDynix Horizon 7.3.4 and Horizon Information Portal (HIP) 3.08
- Computer Management – Comprise SAM 8.5
- Operating Systems (Server): Microsoft Windows 2003/2000 Server, Microsoft SQL Server 2000
- Operating Systems (Desktop): Microsoft Windows XP, Service Pack 3
- Operating System (Laptops): Microsoft Windows XP and Microsoft Vista (single unit for training)
- Productivity: Microsoft Office 2007 SP2 Professional (Word, Excel, PowerPoint, Publisher, Access Outlook, InfoPath)
- Staff E-mail System: Merit Network's "Merit Mail" (uses the Zimbra web client)
- Desktop Security: Symantec Endpoint 11, Faronics WinSelect, Faronics DeepFreeze
- Specialized Software: OpenEye Remote (security), EasyAsk (ILS queries), BookWhere (bibliography), Innovative Millennium (MeLCat), Barcode Label Design, PC Reliance (manual circulation), SideKick (self-check monitor), Adobe Acrobat (PDF creator), Adobe Photoshop (imaging), Print Master (imaging)

In General:

- Public Internet and Productivity Workstations all feature Windows XP SP3, Office 2007 SP2, Internet Explorer 7, Mavis Beacon Typing
- Staff Workstations all feature: Windows XP SP3, Office 2007 SP2, Internet Explorer 7 or 8, Horizon Client 7.3.4

Free and Open Source Software (FOSS):

- Many staff members use the Mozilla Firefox and Google Chrome browsers.
- Filezilla (FTP) and SSH (secure shell) are in use as well.
- Other examples include GIMP for graphics, 7-zip for compression/archiving, and PDF Creator for PDF printing.

3.1.7 Miscellaneous: Telephone System, Electronic Timers

- Nortel/Norstar Modular ICS internal phone system.
- Telephone provider is AT&T, supported through City of Westland.
- Features 4 external calling lines (“hunt group”) plus extra lines for fax machine, staff line, and digital time clock
- 3 electronic timers to control wireless breakers; keeps power only during hours of operating
- Electronic eye / ambient light-sensing system for approximate 80% outdoor lights
- 4 channel timer control for additional manual outdoor lighting; approximately 20%

3.2 Assessment of Current Status

The current status of the technology at the Westland Library can be described as “**Adequate, but not Optimal**”. We have the basic systems common to area libraries, but opportunities do exist for improvement in most technology areas.

3.2.1 Public Facing Technology Status

CATALOG: Horizon 7.3.4 and HIP 3.08 are at “end-of-life” status with SirsiDynix. The Horizon and HIP products have been replaced with the Symphony and Unicorn ILS software systems. SirsiDynix recognizes that, due to the current economic climate, many libraries cannot afford to migrate off of Horizon. Therefore, SirsiDynix is providing limited support (basic maintenance), but no additional updates or patches are being developed for Horizon.

Horizon and HIP provide basic patron database and catalog tools, but are missing many modern features that Patrons often request and expect. Examples of features missing:

- Consistent layout/integration with web site; current catalog differs in form and function from the rest of westlandlibrary.org
- Simpler display of catalog items; retrieved items currently display too much information (full bibliography and MARC information)
- Ability to add reviews, tags, or links to such information within an item’s catalog listing
- Ability to modify/update own patron data online (such as e-mail address)
- Ability for patrons to privately/anonymously track history of items checked out, and the ability to receive suggestions based on history or likes and dislikes; feature would be optional to comply with privacy laws
- E-mail reminders that items will be due soon; current system only e-mails when items are past due

AUTOMATED COMPUTER MANAGEMENT: Comprise SAM 8.5 offers basic patron login management, but has proven buggy and unstable overtime. When it works correctly, SAM is adequate. Re-occurring issues include (but are not limited too):

- Printing not charging, not printing all pages, or crashing; money cannot be added to accounts if print dialog is active.
- Patron logon issues; some patrons occasionally do not receive global system defaults or cannot log on to a station:
- Duplicate or fake accounts; no methods to police these other than manual searches
- Staff training; system is not setup to force data entry in any standard way
- Newer versions v8.5 and higher are not compatible with older receipt printers; we have one working receipt printer after upgrade from v8 to v8.5.
- No real methods for making global changes to the system; for example, reset all user logs.
- Support through Comprise while friendly does requires contact recertification and a change request with every new incident.
- System is a closed system. Even the smallest of issues can only be handled by Comprise; *Example, changing one character in a settings text file.*

Patrons have requested additional features and policy changes with the public access stations:

- Less restrictive user interface; examples: ability to Drag-and-Drop, ability to install software (*although there is currently no good method to allow patron software installs and no area libraries allow for this; we do allow for software install on our training laptops*).
- Abilities to save files locally; a few area libraries have a public shared directory for patrons without writable media (USB flash drives, Blank CD-Rs,..). *The caveat here is that "shared" really does mean shared, with all patrons having access to any files stored temporarily on the shared drive. It is not administratively feasible to give all patrons a home directory to store fills.*
- A print release station, so that other patrons do not steal or accidently take print outs.
- Wireless printing
- Ability to add money to account from workstation, printer, or online.
- New user tutorial for SAM (log on, log off, printing, workstation software available, use policy)
- Better wait list. Easier to read prompts or voice alerts when a station is assigned/available.
- More workstations; utilization rate of the public PC is too high.
- Prevention of recreational access; a number of patrons come in simply to play recreational games or watch streaming media, rather than use the PCs for information and productivity access. This takes PC access time away from patrons that need the PCs for research, information access, and communication (the intended purpose of the public PCs). *We cannot censor our PC access. However, new language in the use policy could ask for patrons playing games, or watching/listening to media to be courteous when other Patrons are waiting.*

Public Workstation Access Method: Public Internet and Productivity workstations require a Library Card (which includes a Horizon ILS User Account) and a SAM User Account. Visitor cards are available to those who do not live in Westland, but have access to a TLN or MichiCard library in their home area. The ILS and SAM systems are complementary and work largely separate of one another. Patrons with a valid library card receive a maximum of 3 hours of daily access. Utilization rate of the 34 3-hour workstations is typically 100% from 1 hour after open until close, during which time an automated wait list system is employed. Once a computer is assigned to a patron on the wait list, they have 5 minutes to locate and log on to the PC.

Some area libraries provide the ability to log on to public computers without an account and without time limits. Currently, Westland Library does not have enough computers in place to make unlimited access practical; our utilization rate is too high.

Public Workstation Software: All public access workstations feature Windows XP SP3, Office 2007 SP2, and Internet Explorer 7. While XP is now two generations removed from the current Microsoft operating system (XP → Vista → Windows 7), it will remain supported by Microsoft until 2014. Furthermore, the current versions of XP and Office provide compatibility with Horizon and SAM. There will not be a path to upgrade the public access stations until both the access management software and catalog are upgraded to versions compatible with the current Microsoft (or other) operating systems. Since the workstations perform their intended functions (information access, productivity), there is no reason to upgrade until Microsoft terminates support of the XP platform.

WIRELESS (Wi-Fi): The provided wireless is distributed by two Cisco access points that share a 16mbps Comcast Business Gateway connection. Access is unlimited and unlocked with no time limits and no password key or library card required. Available protocols are 802.11g (54mbps) with some backward compatibility with 802.11b (11mbps) cards. *Note: not all cards, makes, or models are supported.*

In general, the wireless access at the Westland Library is *less* restrictive than other libraries. However there are a few current flaws with the provided access:

- No ability to print
- Poor compatibility with Windows Vista and Windows 7 (*although this may be an issue with the Microsoft wireless software, not with our access points*)
- No encryption (WPA, WPA2)

These issues might be corrected with network equipment upgrades.

IP address conflicts are common on Vista and Windows 7 due to the way that Windows “caches” or stores previously used settings. Rather than obtain a new IP address with every connection, Vista and 7 try to use the last known IP address. The laptop will fail to connect if another laptop is now using that IP address. The current workaround is to run “repair” when connection problems arise. It may be possible to find wireless access points that force a new IP addresses with all connecting clients. If so, these would lower our support issues with the provided wireless.

CHILDREN'S PC: The Westland Library provides 6 stand-alone, non-networked children's gaming PCs, each with a collection of 8-9 educational or recreational children's titles.

Limitations of these systems include:

- Poor compatibility with modern gaming titles (no dedicated graphics cards; no access to bonus Internet content; both of these issues cause frequent system crashes)
- No Internet access to popular children sites.

COURSE/TRAINING LAPTOPS: For training purposes, the library uses a collection of 14 laptops.

- 9 Dell Latitude D820 laptops running Windows XP are used for all courses (typically 8, plus a spare if any of the 8 cause issues).
- 3 Dell Latitude D830 are used for specialized "One-on-One" and staff training. 1 laptop has XP, 1 has Vista, and 1 has a staff build of XP.
- 2 IBM ThinkPad T42 laptops running XP are used as Instructor or Presentation laptops

These laptops can be configured to last for several more years. They are deficient in one key area: memory. Each system has only 512mb of RAM, which is barely enough to run Windows XP SP3. 1GB is the new recommended minimum for Windows XP, and 2GB is the recommended minimum for Windows Vista and Windows 7.

The current laptop fleet could be improved to provide more current training opportunities to patrons. In 2009, there was a noticeable shift from patrons running XP, to those running Windows Vista and Windows 7. To better meet the demands of patrons and keep up with current technology, it is recommended that the laptop fleet be upgraded to Windows 7 and 2GB of system memory.

Printing / Wireless Access in Training Rooms:

Wireless printing in Meeting Rooms A & B works without issue. The printer in these cases is actually wired directly into a wireless router, providing shared printer access to all wireless laptops in the rooms. The current printing setup requires switching networks and printer drivers in order to print from Meeting Room C. Meeting Room C only allows for one laptop to print at a time. The switching process has been partially automated (with desktop icons to switch printer setups), but still requires administrative overhead. The process as a whole is non-intuitive. Windows 7 scripting can help alleviate some of these complexity issues (the "netsh" command allows for wireless scripting in Windows 7, in XP the command only works with wired clients). Adding a wireless bridge to provide access to the same network in all three meeting rooms would also serve to make the process of switching rooms easier for staff. In a bridged setup, no switching would be required.

PUBLIC AWARENESS/TRAINING: This is one area the library is extremely deficient. The only forms of instruction we have available come in the form of random signage and direct staff interaction. There are a few “HOW-TO’s” on the library website, but nothing that covers the overall use of the various technology items at the library, and nothing that really captures a patron’s attention.

The library should look to exploit technology tools such as video tutorials and have a basic user guide available for the computer systems. Such content would serve as HOW-TOs for using the library computers and software.

ACCESSIBLE TECHNOLOGY: The library has a couple of technology items for patrons with disabilities, these include:

- 1 older CRT-based text enlarger for vision-impaired patrons
- 1 older Kurzweil device that is original to the library (circa 1997); *working status is unknown; no current staff members are trained on the device*
- 6 headphone splitters for sharing audio devices

Some items that can be added:

- Updated text enlarger (LCD based)
- Updated Kurzweil reader
- Assistive listening devices for presentations
- Remote microphones for presenters
- Input devices for patrons with impaired movement (large-key keyboards, large trackballs, ...)

3.2.2 Staff and Infrastructure Technology Status

STAFF OUTLOOK:

- All staff members have basic PC access available through individually assigned or shared-access PCs.
- All staff members have library e-mail accounts.
- A shared network drive was added in 2009 to aid in staff file sharing/backup, and to curtail the dependence on USB flash drivers and floppy diskettes for sharing/backup
- Staff training was provided in 2009 for the new Office suite (Office 2007), new e-mail system (Merit Mail), and using the staff shared drive.

Staff Technology Confidence Levels (Averages: 1 = low; 5 = high)

2008 End-of-Year Survey (retrieved December 2008 – 24 surveys returned)

Confidence about electronic equipment	Perception of patron confidence	Confidence in own knowledge and abilities	Confidence about technical support
2.9	2.83	3.9	2.21

2009 End-of-Year Survey (retrieved March 2010 – 21 surveys returned)

Confidence about electronic equipment	Perception of patron confidence	Confidence in own knowledge and abilities	Confidence about technical support
4.14	3.38	4.12	4.52 ^(*)

(*) Note: 105% improvement in technical support confidence from 2008 levels. All other confidence levels improved as well.

Areas for improvement going forward:

- Development of yearly training / competencies for all library systems; should feature any technology associated with job function in addition to core technology competencies (e-mail, file systems, ...)
- Development of technology “run books”: centralized documentation for running, maintaining, and troubleshooting library systems.
- Cross-training of additional technology backup personnel; technology need not be confined to just one person.

INFRASTRUCTURE OUTLOOK: The following are technology infrastructure items to take into consideration going forward:

System Warranties:

PCs with remaining hardware warranty (as of December 2009):

Security Servers	OpenEye E120	January 2011
Newer Public Computers:	Dell OptiPlex 755	May 2011
Newer Staff Computers:	Dell OptiPlex 760	January/March 2012

All other systems are out of warranty. Lack of warranty can mean increased downtime for system repair. Current strategy is to stock spare parts for component failures.

Software/Hardware Maintenance Contracts

- Horizon/HIP covered by yearly maintenance (software only)
- Comprise SAM covered by yearly maintenance (software only)
- Printers supply contract through ImageOne (1 hour of free printer service for every 10 cartridges ordered)
- Copier maintenance contract through Premier Business Products

Heat and Noise Issues

The Westland Library has no dedicated networking or server room. Networking items are randomly located throughout the building and servers are confined to a multi-purpose office.

Issue with this setup:

- Noise from networking hardware (bleeds into staff area)
- Noise and heat from server hardware (affects general library area; stresses equipment)

Of primary concern is the Technology Workroom, which serves as a make shift server room. At the beginning of 2009, power, heat, and noise issues existed in this space. The power issue has been resolved with a divided circuit, which balances the power load in the room. It is highly recommended that the server room be outfitted with permanent cooling of some sort, or moved to a location that can be outfitted with cooling. The average temperature of the room is 75 F and routinely pushes 80 F in summer months. One fire broke out due to a system overheat in 2009 (HIP server). Because of the heat issues the door to the Technology Workroom has to remain open as much as possible with a fan moving warm air out the door. With the door open, patrons sitting in the table area near the workroom receive a draft from the fan and the noise from the servers. These areas need to be addressed during the next server refresh.

Networking “End of Life”:

The Cisco PIX firewall platform has been discontinued. Cisco will be providing no more updates for the platform, and only legacy support will be provided through 2013.

PIX 515E End of Life Announcement:

http://www.cisco.com/en/US/products/hw/vpndevc/ps2030/prod_eol_notice0900aecd8073fa36.html

The Cisco 2900XL switches have been off of support since 2006. Upgrades to newer support switches are recommended.

Cisco 2900XL End of Life Announcement:

http://www.cisco.com/en/US/prod/collateral/switches/ps5718/ps607/prod_end-of-life_notice09186a008032d42f.html

The 8e6 R3000 is deprecated and only partially functional. It should be replaced during the upgrade of the Automated Computer Management system.

Bandwidth (divided):

5 / 5 M sync ISP #1: Merit Networks via AT&T Opt-E-Man Circuit (5 M up/down synchronous)
Note: utilized by Staff and the Public Internet and Productivity workstations

16 / 1 Mbps ISP #2 : Comcast (16 Mbps burst down / 1 Mbps up) for wireless clients
Note: separated from internal staff network for security. We cannot control what patrons install on their own laptops and wireless devices.

The prevalence of streaming media (videos, games, music, ...) puts a daily strain on our resources. To better divide the traffic and aid in security, wireless clients are sectioned off to the Comcast connection.

Ideas to help improve bandwidth:

- Increase the Opt-E-Man Circuit size (10/10 M)
- Upgrade network infrastructure to “Gigabit” (1000) from 100mb
- Employ a “Layer 3” switch to better section off Public and Staff computers
- Use filtering / bandwidth capping on the public network to reduce the strain of streaming media (hardware devices can provide this as well)

HVAC Automated Control System & Building Maintenance

Siebe Building Automation System Terminal:

- **STATUS: Obsolete**
- HVAC Control PC is old (14+ years); parts are no longer available for PC or system control panels
- Building system is run by a discontinued, unsupported version of Signal 4.4.1 by Siebe Building Automation Systems. If that system fails, restoring the system is difficult and expensive
- System is running on Windows 3.1 operating system (*discontinued in 1995*)
- Support company (ABC Systems, Inc.) has recommended replacement of the system in 2007, 2008 and 2009⁽¹⁾
- **RECOMMENDATION: Immediate replacement/upgrade**

(1) “Though the system has provided fairly good service over the years it should be kept in mind that there are limits as to the maintainability of the system due to availability of repair parts and technical support. The manufacturer’s [Siebe Building Systems] local branch is of no use to us in supporting the software or hardware they originally sold to the facility which is the leverage they use to hold on to their customers. We have always had to go out of state for technical support and parts for these systems which has worked until more recently. As the system ages, the resources for this support has also diminished, which eventually lead to the system being obsolete. Should you have a major problem with the building control system in the future it is uncertain whether the parts or support will be available to restore it to operation. Before a catastrophic failure of the system occurs is the time to begin planning for its replacement. We are suggesting that the facility start to plan and budget for a replacement facility management system before a routine replacement becomes an emergency”

– ABC Systems, Inc., February 2008

Air Flow Efficiency:

- Improving the airflow of the ventilation and humidity system with variable speed devices can help aid in heating and cooling efficiency and reduce operating costs.
- Maintenance can provide the complete report.

System Control Panels:

- Many building system control panels are obsolete and cannot be replaced if a failure occurs.
- A formal recommendation of hiring a building consultant to develop a building upgrade and refurbishment plan is listed here.

3.3 Web Site Evaluation

Current web server: Microsoft Internet Information Server (ISS) running on Windows Server 2003
Other features: CSS, PHP, MySQL, Flash
Hardware: "White-box" RAID 1 tower system (*approximately 5-7 years old*)

Current Site Features:

The current web site has all the content that a library web site should have. The traditional, or static, layout that features well-defined navigation buttons has proven very comforting and easy for patrons. We have received numerous compliments on both the content and the layout.

Missing Site Features:

The current site is largely static information, and not collaborative in most areas. Some Flash elements have been added, as has a portal for virtual librarian services. Modern patrons have wanted the site to be more interactive. Tagging of elements, ability to share pages on social media sites, reviews and history in the catalog (*which is traditionally separate from a library web site*), and feedback forums are just a few examples of modern and interactive features that could be investigated and implemented. Online course and event registration is becoming an increasingly popular trend in other area libraries.

Current Status:

A site redesign is in development and should be launched in 2010. The site will attempt to blend traditional features and navigation for patrons less accepting of changes, and will add modern features that web-savvy patrons demand. The site will be built with the Drupal Content Management System (CMS). A target platform (Linux or Windows) and web server (Apache or IIS) has yet to be selected. Hardware selection and procurement will begin in the first half of 2010.

4 Technology Goals and Objectives

4.1 Aligned Technology Goals:

4.1.1 Goal 1: Develop a Gathering Place - Use technology to aid in the establishment of the library as a "third place".

"The *third place* is a term used in the concept of community buildings to refer to social surroundings separate from the two usual social environments of home and the workplace" ⁽²⁾.

The goal is to make the library a social and cultural gathering place.

To aid in this goal, technology should focus on availability and ease of use. We will provide basic Internet and Productivity software access. We will provide a wireless meeting place, or "hotspot", for patrons to access and collaborate online. We will provide classes and special technology-related events designed for learning and personal enrichment.

(2) Reference: "Third Place", Wikipedia: http://en.wikipedia.org/wiki/Third_place

4.1.2 Goal 2: Targeted Marketing and Outreach – the goal here is to “bring the library to the people” via targeted marketing. Technology plays a large part in communicating our available programs and offerings to the public.

Examples of technology-based marketing include:

- Fliers and signage printed with library equipment
- Electronic and paper newsletters
- The library web site: www.westlandlibrary.org
- Social media sites, such as Facebook, Twitter, and Flickr.
- Desktop icons on public-access workstations
- Lobby slideshows

We will continue these technology-based marketing efforts and look to implement new media and features as they become available.

4.1.3 Goal 3: Education and Economic Development – the Westland Library supports the City of Westland through a cooperative partnership. Part of this partnership involves using technology to support the city’s priorities for education and economic development.

Examples of areas in which technology plays a role in community development:

- Computer Training Lab – providing basic computer training to residents and patrons
- Job Seeker’s Lab – online resume, job search, and unemployment help
- Cross Promotion of City Initiatives – Links to City, Nixel, RecycleBank, and Census
- Availability of in-house audio/visual equipment for speakers, presenters, and politicians

We will continue these technology efforts, seek to expand our offerings, and improve our available equipment.

4.1.4 Goal 4: Improve Service and Access for Patrons – make technology easier to use and more accessible. Goals in this area include making technology more transparent to end users, making policy and procedure easier to understand, and adding features that patrons need.

Examples of ease of use:

- “Open” wireless. No library card or account necessary
- Traditional, menu-based web site with familiar layout for patrons
- Free computer classes. No cost for patrons
- A centralized help desk (the Reference Desk) for patrons

We will strive to improve all library systems, policy, and technology services which will help the library become a more welcoming, accessible place for all.

4.1.5 Goal 5: Infrastructure Sustainment - covers maintenance of all technology items and discovery of any improvements necessary to support changes in the delivery methods of these items. There is no such thing as a one-time technology purchase. Technology requires care and maintenance to sustain, and updating to stay current and relevant to the public. This technology plan will be used to develop a schedule for a sustainable and constantly evolving environment (*see Section 4.3*).

4.1.6 Goal 6: Resource Generation - The Staff and Board of the library are committed to responsible use of all available resources. When these goals require funding beyond our current resources, we will seek creative ways to fund them. We will seek to use technology and targeted marketing (*Goal 2*) to aid in the generation of resources.

4.2 Technology Objectives

Based on the overall goals of the library, the following objectives outline planned features to investigate and implement:

4.2.1 - Objective 1: Develop a Gathering Place

Note: same core goals as objective 4

- Continue to provide Internet access via public computer workstations and wireless access points – *ongoing*
- Update the library site with modern “Library 2.0” features; make the library web site more collaborative allowing patron voices an easier outlet to be heard (*Examples: CMS, tagging, reviews, enhanced feedback*) – *Year 1*
- Implement and improve an Automated Computer Management system that is easy to use, with self-service features -- *Year 2*
- Implement a modern Integrated Library System with interactive client features (self-service, comments, tagging,...) – *Year 3*
- Provide a secure computing experience over both wired and wireless network; investigate and improve filtering technologies to make patrons feel safer at the library -- *ongoing*
- Provide increased computer training programming – *ongoing*
- Implement an easier method for event and course sign-up – *Year 1*
- Provide handbooks, tutorials, and/or video training for the general public on technology items – *ongoing*
- Expansion of the “Virtual Library” to allow the gathering-place concept to extend beyond the library walls -- *Year 1* (Web Site); *Ongoing* (New Technology Exploration)
- Investigate the possibility of loaning out laptops for patron use, while inside the library – *TBD*
- Explore methods for partitioning the library into zones for **1)** traditional quiet reading or study, **2)** social and collaborative, and **3)** technology – thus appealing to the broadest range of citizens – *TBD*
- Add Internet access for children’s area computers with safe access to peer reviewed and approved educational content. – *Year 1 or Year 2*
- Research, add, and upgrade technology that can assist patrons with special needs – *ongoing*

4.2.2 – Objective 2: Targeted Marketing and Outreach

- The rollout of the “Library 2.0” web site (“Library 2.0” = more collaborative) -- *Year 1*
- Improvement of fliers and signage related to technology -- *ongoing*
- Continue electronic newsletters and promotion via web site -- *ongoing*
- Continued user of social media sites, such as Facebook, Twitter, and Flickr – *ongoing*
- Addition of more social media offerings, including streaming media: Youtube, Vimeo – *ongoing*
- Continued cross-promotion of City and Library initiatives with the desktop icons on public-access workstations, lobby slideshows, and web site advertisement -- *ongoing*
- Continue, update, and expand our computer education class topics to provide core computer “life skills” necessary to function in today’s digital world – *ongoing*
 - *Examples: PC Maintenance, Staying Safe Online*
- Investigate the expansion of allowable subjects for specialized “one-on-one” computer training – *ongoing*

4.2.3 – Objective 3: Education and Economic Development

- Continue, update, and expand our computer education class topics to provide core computer “life skills” necessary to function in today’s digital world -- *ongoing*
- Investigate the expansion of allowable subjects for specialized “one-on-one” computer training – *ongoing*
- Continued cross-promotion of City and Library initiatives with the desktop icons on public-access workstations, lobby slideshows, and web site advertisement -- *ongoing*
- Improve and repair audio/visual offerings for speakers and presenters in order to improve the participant experience and aid in promotion – *Year 1*
 - *Examples: remote microphones, repaired speaker system, presentation mouse/remote*

4.2.4 – Objective 4: Improve Service and Access for Patrons

Note: same core goals as objective 1

- Continue to provide Internet access via public computer workstations and wireless access points – *ongoing*
- Update the library site with modern “Library 2.0” features; make the library web site more interactive (*Examples: Content Management System (CMS), Online Events Calendar*) – *Year 1*
- Implement and improve an Automated Computer Management system that is easy to use, with self-service features -- *Year 2*
- Implement a modern Integrated Library System with interactive client features (self-service, comments, tagging,...) – *Year 3*
- Provide a secure computing experience over both wired and wireless network; investigate and improve filtering technologies to make patrons feel safer at the library -- *ongoing*
- Provide increased computer training programming – *ongoing*
- Implement an easier method for event and course sign-up – *Year 1*
- Provide handbooks, tutorials, and/or video training for the general public on technology items – *ongoing*

- Expansion of the “Virtual Library” to allow the gathering-place concept to extend beyond the library walls -- *Year 1* (Web Site); *Ongoing* (New Technology Exploration)
- Investigate the possibility of loaning out laptops for patron use, while inside the library – *TBD*
- Explore methods for partitioning the library into zones for **1)** traditional quiet reading or study, **2)** social and collaborative, and **3)** technology – thus appealing to the broadest range of citizens
- Add Internet access for children’s area computers with safe access to peer reviewed and approved educational content. – *Year 1 or Year 2*
- Research, add, and upgrade technology that can assist patrons with special needs – *ongoing*

4.2.5 – Objective 5: Infrastructure Sustainment

Notes: see section 4.2.7 -- “New Technology Expansion” -- for some possible options
see section 4.3 for the sustainment schedule and section 4.3.1 – 4.3.6 for detailed yearly activities

- Development of Technology Plan that focuses on sustainability with a plan rotation for evaluation of, and replacement of, technology items – *Year 1; ongoing*
- Development of infrastructure “run books” (infrastructure user manuals) and staff cross-training for enhanced disaster recovery and contingency support – *Year 1; ongoing*
- HVAC and Building Control – *ongoing (critical)*
 - Manual backup/imaging of the control computer – *Year 1*
 - Replacement of HVAC Automation System – *TBD (critical)*
 - Installation of variable speed ventilation fans – *Year 1*
 - Replacement of discontinued control panels – *ongoing*
- Upgrade of web server and web site with “current” technology (“Library 2.0”) – *Year 1*
- Upgrade or replacement of training laptops – *Year 1*
- Evaluation of print, scan, and copy options – *Year 2*
- Upgrade or replacement of the Automated Computer Management system – *Year 2*
- Replacement of the Integrated Library System (Patron Database and Catalog) – *Year 3*
- Network Infrastructure – *Year 4 and ongoing*
 - Upgrade of Cisco Switches – *Year 4*
 - Replacement of Cisco Firewall – *Year 4*
 - Evaluate and investigate increasing current circuit size and bandwidth – *ongoing*
 - Investigate combining wireless clients with the library’s internal network; wireless clients would be sectioned off by a “virtual private network” (VPN). The sectioning would be performed with the implementation of a Layer 3 switch – *Year 4*
 - Upgrade wiring runs to Category 6 (CAT 6) or beyond to better handle gigabit networking (current infrastructure has CAT 5. CAT 5e is the minimum recommended to handle Gigabit speeds – *TBD*
 - Bridging more access points into a single network for the Public = “WestlandPL”. Class network would be dropped – *TBD*
 - Add wiring drops (network runs) to the staff copier room and the patron copier room to allow for copier networked features – *TBD*
 - Upgrade of workgroup switches from 10/100 to 10/100/1000 mbps (gigabit networking) – *Year 4*
- Upgrade of public and staff computer systems – *Year 5*

4.2.6 – Objective 6: Resource Generation

With all area libraries facing budget cuts, resource generation will be critical to maintaining the technology infrastructure at any library. The following list provides some ideas for generating revenue and resources for technology items:

- Adding a donation calculator to web site
- Accepting donations on the website
- Having the Friends of Library sell old technology items at quarterly book sales
- Ask for donations at library computer courses (courses are currently free)
- Bring printing prices in line with other area libraries (*Westland currently charges less for Black & White than all area libraries within a 45 mile radius*)

4.2.7 – Objective 7: New Technologies Exploration

The following list highlights technology items to explore for possible future use at the library. There is crossover of these items among multiple technology objectives. Not all of these items can or will be implemented, but if selected they will be removed from the list below and added to Objectives 1-6 and the schedule for the calendar year of implementation (*Section 4.3*)

Integrated Library Systems

Continue to explore multiple system styles and platforms, including:

Co-Operative: TLN Shared (hosted), MLC Evergreen (hosted)

Hosted: Most vendors will host an ILS on their servers
This eliminates the need for onsite hardware

In House(Fee): Traditional vendor-support on in-house servers

In House(Free): Open Source: Evergreen, Koha

Method Strengths:

Co-Operative: reduced cost, no hardware costs, shared support, upgrades included.

Hosted: no onsite hardware requirement

In House(Fee): slightly more control and access to software/hardware

In House(Free): FREE, growing developer community resources

Method Weaknesses:

Co-Operative: very limited customization options

Hosted: hosting fees, additional maintenance fee

In House(Fee): hardware maintenance and support; closed vendor APIs

In House(Free): administrative overhead involved with “going it alone”.

ILS Systems to Consider:

Co-Operative: TLN Shared (SirsiDynix), MLC (Michigan Evergreen)

Hosted: SirsiDynix, Polaris, iii (Innovative Interfaces)

In House(Fee): SirsiDynix, Polaris, iii (Innovative Interfaces)

In House(Free): Evergreen⁽³⁾, Koha

Automated Computer Management

Continue to explore upgrades or replacements for the Comprise SAM system

Virtual Libraries:

- Virtual Reference/Help Desk (already implemented).
- Online User Groups, Forums, or Clubs
- Electronic Book access for web or e-Book Readers (example: OverDrive for Libraries)

Mobile Catalogs:

- Ensuring the catalog can be accessed on a mobile web browser

Automated Circulation Technologies:

- RFID
- Self-Service Payment Kiosks (for fines, printing, and fees)
- Automated (electronic) drop-boxes/sorters

Cost Reduction:

- Investment in Duplex-capable printing hardware
- Continued Exploration of Free and Open Source (FOSS) software and technology
- Investment in energy-efficient technology and building items

4.3 Schedule (subject to change, available budget, and other factors)

The basic schedule is designed with a 5-year rotation in mind for major upgrades (new hardware, new software versions). Minor updates and maintenance (software service packs, hardware repair) may occur at any point in the rotation.

- **Year 1 - 2010:** Web Server, Web Site, and Patron Training Lab Upgrades
- **Year 2 - 2011:** Automated Computer Management Server and Software, and Printing/Copying updates
- **Year 3 - 2012:** Integrated Library System (ILS) Server and Software
- **Year 4 - 2013:** Network Infrastructure Upgrades (Wired and Wireless)
- **Year 5 - 2014:** Computer Upgrades (Public and Staff)

4.3.1 On-Going Technology Items

The following core technology items are researched and evaluated year round, on an ongoing basis:

- Research of Automated Computer Management System
- Research of ILS software options
- Research of Printing/Copying options
- Research of Networking options
- Review of Web Site
- Review and maintenance of building control systems

4.3.2 Year 1 - 2010

- 2010-2014 Technology Plan approval / 2010 Project Approval – *Estimated Q1*
- Development of Library technology “Run Books” – *Estimated Q1*
- Setup test web server (Windows 2008 or Linux) – *Estimated Q1*
- Upgrade training laptops to 2GB and Windows 7 – *Estimated Q2*
- Development of staff core technology competencies and training plan – *Estimated Q2*
- Upgrade public access PCs to Internet Explorer 8 (and possibly Firefox 3.6) – *Estimated Q2*
- Draft of RFP to Automated Computer Management vendors – *Estimated Q3*
- Build of ILS testing server -- *Estimated Q3*
- Rollout new web server -- *Estimated Q3*
- Rollout new web site based on Drupal 6 CMS to staff -- *Estimated Q3*
- Rollout new web site based on Drupal 6 CMS to public -- *Estimated Q4*
- Begin survey process for ILS software – *Estimated Q4*
- Automated Computer Management selection – *Estimated Q4*
- Technology Plan Review/Revision -- *Estimated Q4*

4.3.3 Year 2 - 2011

- Technology Plan approval / 2011 Project Approval – *Estimated Q1*
- Rollout of new server for Automated Computer Management - *TBD*
- Rollout of new/upgraded Automated Computer Management system - *TBD*
- New Enterprise Content Filter - *TBD*
- Integration of Printing and Copying systems - *TBD*
- Draft of RFP to Automated Computer Management vendors – *Estimated Q3*
- Begin exploration of next network infrastructure refresh – *Estimated Q4*
- Integrated Library System (ILS) selection – *Estimated Q4*
- Technology Plan Review/Revision -- *Estimated Q4*

4.3.4 Year 3 - 2012

- Technology Plan approval / 2012 Project Approval – *Estimated Q1*
- Rollout of new server for Integrated Library System – *TBD*
- Rollout of new/upgraded Integrated Library System software - *TBD*
- Draft of RFP to Networking vendors – *Estimated Q3*
- Begin exploration of next computer refresh – *Estimated Q4*
- Networking equipment selection – *Estimated Q4*
- Technology Plan Review/Revision -- *Estimated Q4*

4.3.5 Year 4 – 2013

- Technology Plan approval / 2013 Project Approval – *Estimated Q1*
- Rollout of new network infrastructure - TBD
 - Includes:
 - New Firewall (migration off of Cisco PIX – end of support for PIX is 2013)
 - New Enterprise Switches (migration off of Cisco 2900XL, add Layer 3 managed switch)
 - New Wireless “N” (or current standard) access points
 - Wiring upgrade from CAT 5 to minimum CAT 6 (for guaranteed 1000mbps throughput)
 - Migration from 100mbps Ethernet to Gigabit 1000mbps Ethernet
- Obtain quotes for computing hardware – *Estimated Q3*
- Begin review of web site hardware/software – *Estimated Q4*
- Begin review of laptop training lab – *Estimated Q4*
- Public and Staff computer selection – *Estimated Q4*
- Technology Plan Review/Revision -- *Estimated Q4*

4.3.6 Year 5 – 2014

- Technology Plan approval / 2014 Project Approval – *Estimated Q1*
- Upgrade of Public Computers - TBD
- Upgrade of Staff Computers - TBD
- Rollout of current operating systems (Windows and/or Linux) – TBD
- Obtain quotes for web site hardware/software – *Estimated Q3*
- Obtain quotes for laptop training laptop refresh – *Estimated Q3*
- Begin survey of Automated Computer Management System – *Estimated Q4*
- Web site hardware/software selection – *Estimated Q4*
- Laptop Training Lab refresh selection – *Estimated Q4*
- Technology Plan Review/Revision -- *Estimated Q4*

5 Technology Plan Review Schedule

The Technology Plan shall be reviewed and updated as necessary once a year. The library will gather data from patron requests, technology usages patterns, and staff feedback on existing items. The Technology Committee – with the Technology Coordinator working as lead – will oversee any technology changes and will assess if an item will meet the goals outlined in this plan. Basic questions for any changes should be: “Do we really need it?”, “Will it get used?”, and “Will this help us meet our vision, goals, and objects?” The answer in all cases must be “yes” for any technology changes to be approved.

In general, the review and update of the technology will follow this basic schedule:

- December: Draft of Updates
- January – February: Review Period
- March: Final Draft and Approval by Technology Committee
- April: Submission to the Library Board