



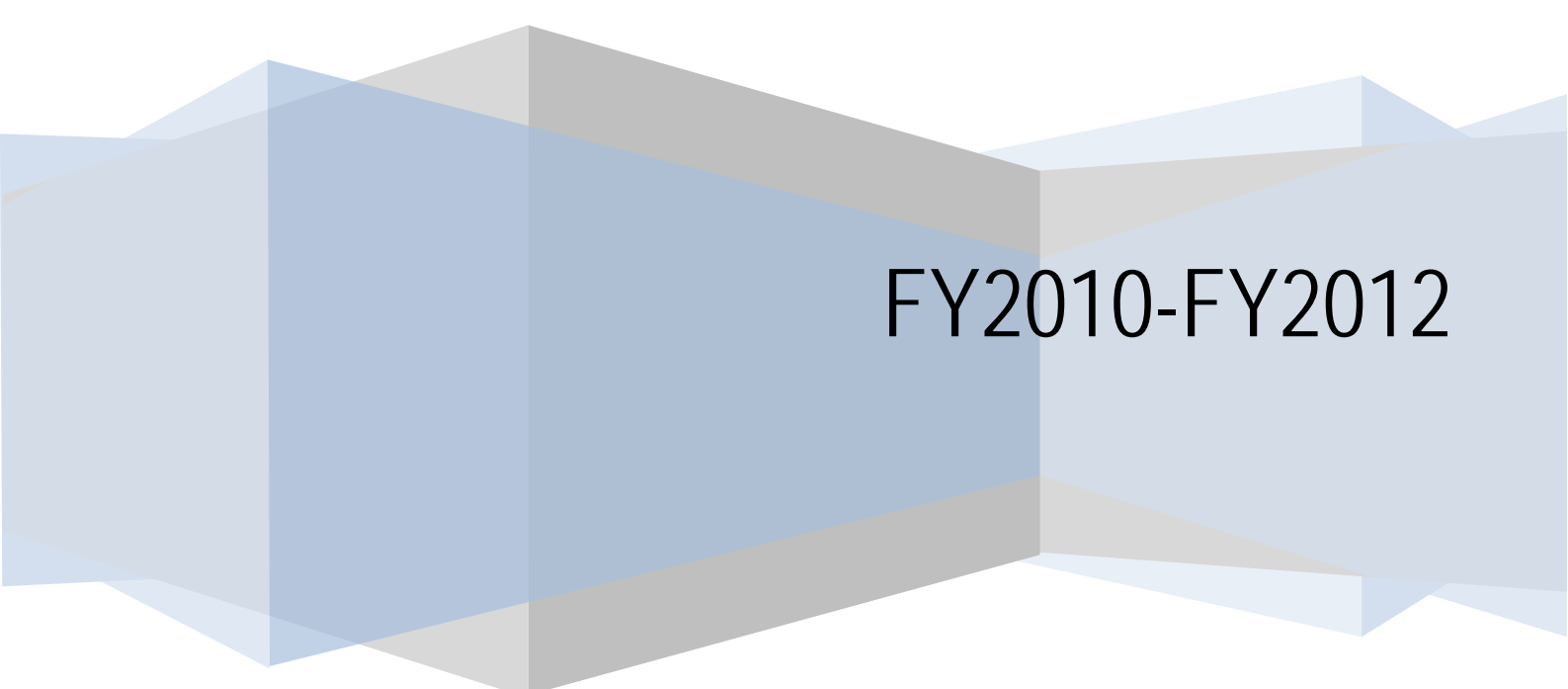
# WORCESTER PUBLIC LIBRARY TECHNOLOGY PLAN

30 June 2009

3 Salem Square

Worcester, MA 01608

<http://www.worcpublib.org/>



FY2010-FY2012

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## EXECUTIVE SUMMARY

1. Infrastructure
  - 1.1. Upgrade LAN/WAN network to provide greater speed and bandwidth for delivering audio, video and data and to provide information access from anywhere at any time.
  - 1.2. Ensure the most efficient and up-to-date hardware that is available to Library customers and staff for the provision of services.
  - 1.3. Create a "wired" community which links Main Library, Frances Perkins Branch, Great Brook Valley Branch and the community with the world.
  - 1.4. Develop a technology-based internal communications structure for all staff across three locations.
  - 1.5. Provide necessary technology to make administration of the Library and its facilities more productive and cost effective.
  - 1.6. Provide adequate staffing and equipment to handle technology needs.
  - 1.7. Develop and evaluate computer related policies to ensure Library's use of technology and Internet is relevant and effective.
  - 1.8. Develop file management and archival system.
2. Technology Resources
  - 2.1. Ensure equitable access to technology resources.
  - 2.2. Provide innovative technology services.
  - 2.3. Ensure that the Integrated Library System is satisfactory to meet the growing customer population and use, the growth of the Library collection, and management needs.
  - 2.4. Expand the scope and functionality of the Library's web site and staff home page.
3. Customer Services
  - 3.1. Assess and improve library-sponsored programs for patrons of all ages.
  - 3.2. Use technologies to improve customer service for staff and the public.
  - 3.3. Increase and improve electronic services available to the public.
  - 3.4. Provide Library customers with user friendly services that are pertinent, accessible, and useful.
4. Staff Development
  - 4.1. Ensure that all staff will be technology and information literate and competent.
  - 4.2. Provide ongoing staff development training to enhance administrative technology skills.
5. Information Access
  - 5.1. Use online technologies to enhance communication between all Library stakeholders.
  - 5.2. Assure staff and Library users timely access to print and non-print materials, electronic resources, and online databases.
  - 5.3. Provide Worcester community access to the Library's bountiful and valuable resources.
  - 5.4. Improve electronic access to library resources by digitizing identified collections.
  - 5.5. Develop a community outreach plan to promote the Library's electronic services and resources to the public.
6. Funding
  - 6.1. Plan, monitor and establish guidelines for obtaining and distributing funding for technology.
  - 6.2. Seek out, identify and obtain appropriate grant and funding resources.

## INTRODUCTION

The Worcester Public Library uses information technology to provide technologically advanced information and independent learning resources for the City's residents and for the Library's visitors from around the world. The Library seeks to make all needed formats of information available to its users, whether print or electronic. The Library also strives to provide expertise in using those resources, and to provide an environment that enhances study, and supports lifelong learning and the acquisition of knowledge as well. Technology can expand the services that the Library delivers to its users, and can extend the capacity of the Library beyond its walls.

Both the Library staff and the Library Board recognize that planning is complicated due to the rapid changes in technology. This plan is intended to be continuously reviewed and revised as necessary in response to emerging trends in information technology, changing community needs, new partnership opportunities, and changes in funding available to the Library. It sets out overall goals and general direction for the Library.

This new 3-year Technology Plan will offer WPL the opportunity to build on the technical advancements made in the Library over the past three years. It will still focus on and emphasize the need to provide the staff and library users an educational experience that:

- Enhances access to information by minimizing barriers,
- Uses technology to remove limit to access,
- Automates library operation to streamline workflow,
- Makes better use of sharing resources, and
- Incorporates technology to enhance lifelong learning.

## ACCOMPLISHMENTS FROM PREVIOUS PLAN

### FY2007 (July 2006 – June 2007):

Year 2006-2007 is the first year of the 2<sup>nd</sup> Three-Year Technology Plan at the Library. Tremendous progress has been made towards achieving the goals and objectives.

- ❑ We started the year by installing and replacing staff workstations to meet the hardware requirements of C/W MARS, the library consortium, Innovative Integrated Library System. We then continued with the projects of replacing and upgrading Pharos software and its server, which governs public computer time and the reservation system, and the OCS software to improve public printing management. Old problems that plagued the old servers have disappeared after the new upgrades. Two other servers' setup and upgrade were performed for the Altiris Deployment server in November and for the Proxy server in February for better performance.
- ❑ During the late summer, we rolled out 3M Privacy LCD Flat-Panel monitors with secure locks for adult Internet computers across three locations in accordance with the Library's Internet Policy. These built-in privacy screens have saved Library staff the time and money it cost to deal with constantly broken privacy screens in the past. Free special deal LCD monitors were placed on all Public Service Desks at three locations and at reference staff offices at the Main Library.
- ❑ In September, we completed the migration from Pegasus to Microsoft Outlook email client. We have also successfully deployed Outlook Calendar to three branches. The scheduling feature on the Staff

Home Page was implemented in early summer and significantly reduced the overhead in scheduling. Outlook Calendar has proved to be very popular with staff.

- ❑ Free open source software is always on the IT hot list. Besides Drupal, which we use as a base for the Staff Home page, we also installed and configured "Open Audit". It not only assists IT staff in managing our Open Volume Licenses more effectively, but it also is a great tool for hardware searching and for doing inventory. Another freeware called CACTI had been worked on and completed in March to allow us to monitor network traffic and bandwidth to provide a higher quality of service
- ❑ We continue to be cost conscious. Three major cost-saving computer reconfiguration and recycling projects were successfully implemented. The first two utilized the Microsoft Terminal Server technology to use lower -end computers as thin clients connecting to a server to gain server speed and performance. This approach resulted in opening the Computer Lab for public use during Main Library open hours and enhancing the computer performance for 1<sup>st</sup> and 3<sup>rd</sup> floor reference staff workstations. The last project was to reconfigure the adult and young adult areas by redistributing eleven newly-added Internet reserved computers to their respective user groups. It reduces the longer waiting time for both groups and also provides young adult users with their preferred area to interact socially.
- ❑ The Main Library has been offering wireless Internet since November. Using five strategically placed Wireless Access Points, patrons can connect to the WPL Wireless network from virtually anywhere in the library, especially all seated areas. This was set up in a manner that we can collect statistics on Wireless usage and database usage.
- ❑ In December, the part-time Computer Technician took on the extra duty of library Webmaster. Although he is still under training, we have received positive feedback about his responsiveness when it comes to updating existing pages. With collaborative efforts, he worked with the young adult TAG group on redesigning the Teen page.
- ❑ Several steps were taken to configure VNC (Virtual Network Computing) in both branches to allow remote access and troubleshooting between the Main Library and two other branches. It has improved IT's response time and backup support. HelpDesk requests are normally completed within the same day, and they seldom exceed more than a week to complete even considering all three branches.
- ❑ A second wave of computer replacement projects started in January. Thirty-two over 6-year old public computers were replaced with new HP DC5700 models with Windows Vista capability on a low price tag. Positive feedback was received from patrons on the blazing speed of these units. All public computers were equipped with 92 free licenses of Microsoft Office 2003 suite, Microsoft Publisher 2003, Microsoft Front Page 2003, Microsoft Encarta 2005, and Microsoft Streets and Trips 2006 from the Gates Foundation.
- ❑ Another phase of computer recycling was applied to individual database workstations, such as the Career, the Westlaw and the 15-minute Express Internet to reduce the cost of purchasing new computers. All Genealogy computers were upgraded and networked from Windows 98 to Windows XP with newer Gates computers and were loaded with the Canadian databases.
- ❑ In addition, we also revised policies and procedures on Computer Lab reservation, Internet/computer use, user privileges and privacy, wireless Internet, and computer opening and closing.

- ❑ After a year of using EDIFACT ordering, the Acquisitions unit started using the EDIFACT invoicing with three major materials vendors in December. It not only expedites the ordering process by allowing electronic orders to be sent to participating vendors, but also receives invoices electronically as record keeping for what library has accepted, rejected, and paid for materials retention. Electronic confirmation that provides selectors with the ordering status of materials was implemented in February.
- ❑ A new version of B&T Title Source III and two-upgraded versions of OCLC Connexion software have been implemented for online selection and online cataloging.
- ❑ We also took advantage of integrating acquisitions with a serials module that results in faster serials standing orders processing. In collaborating with subject specialists, retention information of all standing order titles was entered into the serials module and enables staff to check in these titles with ease and also provides valuable holding information for library users when searching the online catalog.
- ❑ A total of approximately \$4000 in credits was granted by OCLC (Online Computer Library Center) due to catalogers' efforts in original cataloging and materials holding deletion. Processing staff have also completed the Children's Room de-cuttering project and have moved to the next project – entering Romance fiction into the online catalog database.
- ❑ To address the call number prefix issue, several initiatives were launched. With collaboration with public service staff and C/W MARS staff, almost every call number structure was re-examined and/or globally changed and updated to make it user friendly and self-service feasible. Over 300 new item templates were created for a smooth MilCat migration. Staff were also trained in using this new integrated cataloging module.
- ❑ Materials turn-around time has improved; especially noteworthy is that the DVD formats are now cataloged and processed for users to check out on the release date. Two new formats, graphic novels and digital players, have been added to the library collection on high demand.

**FY2008 (July 2007 – June 2008):**

- ❑ The Regional Reference Blog was launched in June 2007 by using Google Blogger to serve as a new, more interactive communication tool focused on reference services within the Central Massachusetts region.
- ❑ A series of computer replacement plans were implemented throughout the main library and branches.
  - The Talking Book Library's staff and public computers were upgraded from Windows 2000 to Windows XP in July. Four new Dells were purchased and old ones were recycled to the TBL Public area at the Main Library. In April and May, all TBL computers were replaced with Dell Optiplex 330 model. The recycled machines were used later in the computer lab upgrade.
  - With an incredibly attractive unit price from TechSoup, all staff computers were able to upgrade to Microsoft Office 2007 Suite in December 2007.
  - In February 2008, we deployed new images for the Frances Perkins Branch Library Public computers containing the latest software, such as Microsoft Office 2007 Suite.
  - In April 2008, 8 new computers were added to the Adult Internet Computer area to alleviate the growing queue for Adult computer use. Besides this, we also reimaged all 57 Public computers with the latest software including the Microsoft Office 2007 Suite, Symantec Endpoint Protection (v.11), Microsoft Streets and Trips 2006, Microsoft Encarta 2005 and more.

- All C/W MARS computers were replaced with Dell Optiplex 330 model to meet the latest specifications for running Millennium program in April.
  - During the months of April and May, the Youth, Circulation, Periodicals and Reference staff computers were upgraded with Dell GX520 model (recycled from Optiplex 330 Project). Other specialized computers were also upgraded with GX520 model which include TS labeling computers and Reference Desk (non-C/W MARS) computers.
  - In June 2008, two computers designated for Health Management were added to the newly created Health Reference Center on the 2<sup>nd</sup> floor. The health computers allow 1-hour session per use.
  - Computer Lab machines were upgraded in June by using free Microsoft SteadyState's integrated disk protection feature. It erases all changes and brings any computer back to its same pristine state by simply rebooting or shutting down the device, which saves IT staff valuable time in maintenance.
- ❑ We replaced the old Checkpoint (now called 3M) server with the newest Intelligent Library System software in July. The old existing self-check station was also traded in towards 3 new self-check stations, which are located in front of the circulation desk and between two OPACs isles.
- ❑ We continue expanding the scope and functionality of the Library's web site by adding the following features:
- In August, Web technicians set up and configured EventKeeper Feed to display library upcoming events on Library incoming new web site.
  - In February, we added RSS feed and podcasting to our homepage. We use podcasting to deliver sound files to library patrons.
- ❑ Between September and December in 2007, we had two student interns from Worcester Technical High School who performed various tasks such as closing help desk tickets and doing simple computer setups.
- ❑ With Foundation grant, the Library subscribed one-year Rosetta Stone Online Language learning service in September. The supporting software to run Rosetta Stone was also installed in Computer Lab for public use.
- ❑ From November to December, we worked with C/W MARS staff to set up Serials Solutions' OneSearch 360 interface for federated searches across all of our online databases. This 360 Quick Search box can be used for simultaneous searching in any selected web sites and online databases.
- ❑ IT made some changes on Wireless Gateway Server to combat some issues we were experiencing with original portal setup. However, the capability of gathering access information was no longer available.
- ❑ Due to tax season, an online appointment calendar was created for the AARP Tax appointment booking system. It is free open source software called MRBS (Meeting Room Booking System), which allows staff to book appointments anytime from anywhere in the library.
- ❑ In February 2008, the Library provided its first time online survey mechanism on two computers during its annual survey week at the Main Library. The online survey software is free open-source software called UCAS that uses a free MySQL database. It turned out that half of the survey results came back

from patrons using the online version.

- ❑ In March 2008, we added the MDF data closet system (mainly phone system) to be included in the main UPS power backup system located in basement. Originally this UPS system backed up the entire server room with electricity in the event of a power failure.
- ❑ A new Symantec Endpoint Protection Management Server, which supersedes the existing Symantec Antivirus Server, was installed in March. The latest version 11.0 seamlessly integrates essential technologies such as antivirus, antispymware, firewall, intrusion prevention and device control. In April, Symantec Backup Exec 11d, with the AOF (Advanced Open File) agent built in was upgraded.
- ❑ A series of server upgrades and software improvement were done during this year.
  - In October, the Windows Software Update Services (WSUS) server was upgraded from 2.0 to 3.0. The function of the WSUS server is to download and push out Windows critical updates to all computers on the network. It also pushes other updates including Microsoft Office updates.
  - WSUS 3.0 was later upgraded to WSUS 3.0 SP1 in Feb. 2008.
  - We also upgraded the Altiris Deployment Solution Server to Altiris 6.8 SP2 in December. This application is a key service on our network for imaging and supporting client machines in a more time/cost efficient manner.
  - In April 2008, new software called Dameware was purchased and installed for remote assistance to all network computers. This software allows IT staff to better assist staff with computer related issues in a remote fashion instead of onsite visit.
  - In May 2008, the WSUS Server was migrated to the Symantec Endpoint Protection Management Server for better control.
- ❑ We started the process of adding online resources to our ILL database to provide access points through the OPAC.
- ❑ We continued maintaining and updating check-in records for all standing orders. A newly procedure was created for superseded Serials to expedite the withdrawal/transfer process for both the subject specialists and the Technical services staff. A quarterly updated Serials Standing Order List was made available on Library's Intranet - Staff Home Page.
- ❑ A VM13500 Buffing Unit for CD/DVD repair machine was purchased, which expedites the damaged materials turnaround time by allowing for repairing in-house.
- ❑ Due to the changes in the regional delivery system, a procedure of adding an additional barcode on the front of an item to enhance interlibrary loan was created and resulted in office rearrangement and workflow modification in the Acquisitions and processing area.

**FY2009 (July 2008 – June 2009):**

This is the final year of the three-year Technology Plan at the Library. The highlights of accomplishments are network infrastructure upgraded by replacing all aged switches at Main Library, a new Library web site launched, and prevalent use of web 2.0 tools by reference staff for regional service.

- ❑ Network infrastructure was upgraded and replaced to high speed secured architecture.

- Three State contract IT vendors were met with in October concerning new network design and the implementation of new switches, from the core to the edge. Through months of negotiations and discussions, the finalist, CBE Technologies, was chosen to assist with the design, configuration and installation of a new Cisco LAN Infrastructure. A final proposal was handed in to the City in early December.
  - The Network Upgrade Project was unfolded in early April when City approved a capital funding of \$178,322.99 in late March. During the month March and April, IT staff prepared all data closets for a smooth installation and deployment of the Switch Replacement Project. This pre-installation work included identifying and mapping all patch panel ports to current usage, updating Visio drawings of current and future network designs, and upgrading software to certain specific servers.
  - The final cutover date was set for April 20<sup>th</sup> (Patriot's Day) to reduce and eliminate any disturbance of Library's operations to a minimum. All aged and end-of-life switches were successfully replaced and upgraded throughout 10 data closets at Main Library including the core switch Cisco 6509 E-Series on the second floor. The new network infrastructure allows future plans for applications such as Video Conferencing for workshops that necessitate faster infrastructure technologies as well as potential Voice applications should the City move to a VoIP solution in the future. Following the upgrade, CBE provided IT staff with specific training and knowledge transfer of Cisco system.
- ❑ A new cable line for Internet access, also via Charter Communications, was added in late September. It is a 10Mbps up, 2Mbps down speed line to solely dedicate to the public computer use while the existing line (5M/2M) is solely dedicated to staff computers including the Talking Book Library. The configuration was done through the Sonicwall, the Library's firewall.
- ❑ In October, an automated call number label generation program from III system was implemented to free up staff time on retro-conversion projects. All catalogers were offered printers to generate call number labels automatically when completing cataloging and item entries.
- ❑ A series of server upgrades and software improvement were deployed throughout the year.
- An application server was set up in August to alleviate the burden on the Altiris server and to host applications such as the new Rosetta Stone CD-ROM/Network version, FC Search, and Zoomtext - the assistive technology. It functions as a software deployment and storage server.
  - The first Windows 2008 Domain Controller was installed in September by using the recycled Buildings Server (Dell Power Edge 2650). The sole purpose of this server is to be a domain controller with no other functions.
  - In December, the Update server and Symantec Endpoint Protection Manager and WSUS were updated with latest upgrades, and all client machines reflected new updates as well.
  - A new VMware ESXi server, a hypervisor-based virtual server platform, was set up in January to consolidate a few servers to this virtual platform by saving hardware and electrical resources.
  - Due to the increasing demand of data storage, the Reo1000 firmware, the backup storage device, was upgraded to the latest version in January as well. The storage capacity was expanded from 1TB to 2TB total.
  - In February, the Intranet server that hosts Staff Home Page was migrated to the VMware ESXi server and the software platform WAMP, which includes Apache, MySQL, and PHP, was also upgraded to the latest version. The open source Content Management System Drupal that we

use for Intranet site was upgraded from version 5.1 to 6.9 to provide us with the most up-to-date module configuration.

- The printing problems that we have with our outsourcing vendor Copy Data continues. During the month from March to May in 2009, IT staff have been working with its subcontractor on the OCS printing software and making only snail's progress. IT staff moved the Public Print Server (OCS) to the VMware ESXi server as a virtual machine.
  
- ❑ During the month of December, several online interview web services were explored for use with the interview process for the Head Librarian position. In the end, we chose free Skype as the medium as well as the webcam for the video capturing device for the Library Board to conduct candidate interviews remotely. It proved very satisfying in terms of cost and application.
  
- ❑ During the Library Annual Survey week in February, all website visitors were greeted with the option of filling out the Annual Online Survey. All OPACs and Internet computers governed by Pharos were also directed to this online survey as well.
  
- ❑ A series of computer replacement plans were implemented across three locations.
  - All management computers were replaced to the new Dell Optiplex 330 model with Windows Vista installed in October.
  - With recycled computers, the Computer Lab machines were once again being upgraded in November to keep up the high demand in using the Lab.
  - Ten staff members were deployed with 19" flat panel monitors in February.
  - In order to meet new requirements for the OPACs, all of our OPAC computers were redeployed by using recycled desktops with Internet Explorer 7.0 installed. The previously HP thin client OPACs had Windows XP Embedded and did not support IE7.
  - In March 2009, all staff computers were upgraded to the same late model of computers for the first time in six years.
  - Two C/W MARS-connected computers were configured and relocated to the Periodicals office for shared access for use with the Serials module of the III ILS system.
  - With high demand for using computers for job search and resume building, the Career computers on the 2nd floor were expanded to three in April 2009. The Health Center computer was reduced to one with fewer activities.
  - The Atiris Server was upgraded to 6.9 SP1 in April, which fixed the deployment of the image and Windows Vista problems.
  - WhatsUp Gold v12.4 server was finally set up to monitor the health of the Library computer network. The Initial attempt to set this up last year was unsuccessful due to an improperly configured core switch. After the installation of the newly configured core switch, the application appears to be working. With this software we should be able to quickly pinpoint trouble spots on the network and better diagnose server issues.
  
- ❑ Go green! An improved boot and shutdown procedure for all the public computers was implemented in May. Instead of changing each individual computer's BIOS to auto-boot up in the morning, now all public computers can be turned on and shut down automatically via a script. All the public computers should boot up a half hour before the library opens, and all shut down when the library closes. This saves electricity and improves staff opening procedure.

- ❑ No more RFID tag attached “Express cards” for the 15-minute Express Internet computers! In June, the existing Pharos system which governed these Express computers was replaced by Fortress Time Limit Manager Software. A number ticket that is generated randomly by the new system is the login pass for Express computers. No two tickets are alike which eliminates the reuse of the ticket. The existing policy of two sessions per day per user still stands.
- ❑ Library staff conducted CMRLS workshops and in-house classes on using new technologies and database searching, including Novelist Plus, American History (ABC-CLIO) and World Geography (ABC-CLIO) and Prices4Antiques, and more.
- ❑ There have been new Qwidget added to the 24/7 Mass Answers screen and Twitter added to the CMRLS blog. More enhancements were added to Library web site as well, such as detailed instructions for downloading electronic audiobooks, subscribed Bookletters service with email newsletters capability, and Twitter communication to record patrons’ requests and suggestions for new materials.
- ❑ The New Library web site has finally launched in June. Using dynamic .net technology, we have planned and organized content layout for a major re-design since last year. This new site provides Web 2.0 platform and tools, such as blogs, flickr, podcasts, and vodcasts and more. The web content can be easily updated and globally changed. The new site implements database utilization for delivery of information effectively.

## **LIBRARY VISION**

The Worcester Public Library will be a welcoming destination and the leading provider of resources to inform, enlighten and enrich our diverse community.

## **LIBRARY MISSION**

The Worcester Public Library serves as a gathering place that actively promotes the free exchange of ideas in our democratic society. The Library makes information and services available to all people while fostering intellectual freedom, protecting privacy, encouraging personal growth and enrichment, and celebrating our diverse community heritage.

## **TECHNOLOGY PLAN MISSION**

The Technology Plan mission is to support the Library’s mission and vision through the strategic use of information technologies as they evolve and develop as well as to ensure that the use of technology will enhance the delivery of information, provide library users with the opportunity for self-education and personal growth, promote an environment conducive to lifelong learning, and have staff who are proficient in technology.

## **TECHNOLOGY PLAN VISION**

The Worcester Public Library will stay abreast of new technologies to provide the appropriate technology and technology standards to effectively meet the information needs of users of all ages. Hence all Worcester

residents will have equitable, convenient, and universal access to the information and knowledge resources they need to meet personal, work, educational, and community goals.

## CURRENT TECHNOLOGY IN PLACE

The Worcester Public Library is a member of C/W MARS, a consortium that provides a database of the library's collection through the Innovative Interfaces' Millennium Integrated Library System.

The Worcester Public Library currently has 1 Cisco 6500 core switch, 10 Cisco edge switches, 19 servers, around 300 computers and 62 printers in use. Approximately 140 workstations are available to the public at the Main Library running on a Windows XP platform, to provide Internet access, MS Office 2007 suite including word processing, online databases, CD-ROM products, and the online catalog. Print and photocopy services are outsourced to a vendor, CopyData, who provides the Library all of printing and copying equipments. Print capabilities are governed by use of OCS software, which spools print jobs to a release station on all three floors where users pay for their copies. A few older machines running on Windows 2000 are used for computer SignUp, Queue and print stations.

There are about 85 staff computers on XP OS at the Main Library, each with Internet connectivity. The Management Team workstations are running on Windows Vista. Great Brook Valley Branch Library has 2 staff workstations and Frances Perkins Branch has 5 staff workstations that are currently running on a Windows XP platform.

The Frances Perkins Branch Library at Greendale offers 6 computers that provide PAC, Internet access, MS Office 2007 suite including word processing capabilities, online databases, and CD-ROMs to the public. Great Brook Valley Branch Library provides 4 computers to the public, running on Windows XP platform, with Internet and MS Office 2007 suite including word processing capabilities. Printings through laser printers are installed for both branches. Both Main Library's Children Room and Great Brook Valley Branch offer free printings for users.

The Talking Book Library for the Blind and Physically Handicapped of the Worcester Public Library provides recorded books to people in central Massachusetts who are unable to use print materials. Five public computers are available for public use. Due to specialization of the software required to run this library, several special devices are available.

Internet access from the Main Library is through two bundle T1 lines that originate at C/W MARS where a direct connection is made to the University of Massachusetts; in addition, two cable lines (10M/2M & 5M/2M) through Charter cable connection are available for Internet access as well. Internet access at Frances Perkins is by a fractional T1 line through C/W MARS and a 3M/384k cable line through Charter. As for Great Brook Valley Branch, the Internet access has the same setup through C/W MARS plus a 1.5M/256K cable line through Charter.

Telephone reference services and online e-mail services are mediated by staff. Access to electronic products is provided by MBLC, CMRLS, C/W MARS, and through the Library's own subscriptions as well. This service is accessible to both branches.

Wireless access to Internet is available on all floors at Main Library. The Frances Perkins Branch Library also provides wireless service.

## PREMISES FOR THE NEW PLAN

The construction of this new plan is based on the current assessment of computer network needs as well as the realistic expectations of the amount of capital funding and ordinary maintenance in coming years.

With limited funding, the Library has strived to locate funds to execute many goals and objectives in previous technology plans. However, there is still an urgent requirement to address the pressures of the "wear and tear" associated with the age and intensive use of the Library's computers. The continuous effort to renew, upgrade, and replace the computer equipment is obviously very important at the Main Library and its branches.

With more new formats demanding electronic access and heavy use of Web 2.0 application on public computers, providing a bigger, faster Internet bandwidth is a "must do" project for these coming years. Getting broadband stimulus funding for the Library is a collaborate effort that has to start now.

Library users, as well as staff, expect access to technology to be current, readily available and easy to maneuver, with appropriate support in place to address unexpected difficulties. Library administration expects library staff and new hires to be technologically savvy, and exposed to the latest technologies. With continuous emergence of software packages and advances in hardware systems, and new approaches to web 2.0 and 3.0 technology, the Library faces a decision. Will it be an early adopter of emerging technologies, or will it adopt new technologies once they are proven to provide increased functionalities and benefits when costs have decreased?

The Library continue transitioning from a labor intensive stance to a more automated model with respect to the presence of new network switches, additional servers, upgraded desktop access, on-line access for data methodologies, web registration and the implementation of a portal solution. In addition, as the Library undertakes new community "hub" initiatives emphasis will be placed on incorporating appropriate infrastructure to support technology, as well as "green" technology.

Access without sufficient support to address user needs is another area of concern. IT staff strive to maintain existing network infrastructure, computer services, and internal and external web portals with top priority. Library decision-makers, however, must balance all decisions in light of fiscal accountability. This is especially difficult in view of current economic conditions. The Technology Committee, which now consists of all management team members, should examine and recommend how Library might best utilize its existing financial resources to avoid useless or unnecessary technology and to budget accordingly so that the institution can continue to fulfill its mission.

Ultimate goal of this Technology Plan is focused on to build a secure and efficient network structure and to keep up with new technology to better serve our public. This plan is subject to change when the Library's 5-year Strategic Plan is reviewed and revised.

Listed below are goals, objectives and action steps for a 3-year Technology Plan (FY2010-FY2012) to guide the Library in its technology decision-making process in the coming years. The Library management team should use this document as a starting point to make decisions regarding financial allocation of funds for technology.

**GOALS AND OBJECTIVES**

<b>GOAL 1: Infrastructure</b>				
<b>To provide innovative state-of-the-art technology infrastructure.</b>				
<b>OBJECTIVE 1.1: Upgrade LAN/WAN network to provide greater speed and bandwidth for delivering audio, video and data and to provide information access from anywhere at any time.</b>				
<b>Action Step</b>	<b>Timeline</b>	<b>Resources</b>	<b>Responsibility</b>	<b>Success Indicators/6-month Evaluation</b>
1.1.1 Implement server virtualization technology and replace aged servers with blade server architecture to increase capacity, lower operating cost, and deliver better performance.	FY2010	Capital budget	ADM, IT	
1.1.2 Replace the "out of warranty" network backup system to ensure crucial network data files, software and documents are reproduced from the originals for emergency recovery.	FY2010	Capital budget	ADM, IT	
1.1.3 Place wireless hub in Great Brook Valley Branch to facilitate wireless computer service using IP protocol.	FY2010	Gates Foundation grant	ADM, IT	
1.1.4 Install wireless controller to create a staff wireless infrastructure besides the existing public wireless infrastructure.	FY2010	Purchased	ADM, IT	
1.1.5 Continuously review space needed for electrical power/cabling of three branches as they relate to use of technology.	Ongoing	OM	Building, IT	
1.1.6 Purchase power management control software.	FY2010	OM	ADM, IT	
1.1.7 Increase Internet bandwidth at Main Library and two branches as feasible.	Ongoing	Grant, OM	ADM, all Divisions	
1.1.8 Explore connectivity from Main Library to Frances Perkins Branch and Great Brook Valley Branch with fiber networks to share resources and provide redundant Internet cooperative.	Ongoing	Capital, OM	ADM, IT	
1.1.9 Purchase web and content servers needed to implement use of Blogs, Wikis, RSS feeds, Podcasts, online classes, and simulations to enhance learning opportunities for library users.	Ongoing	Capital, OM	ADM, IT	
<b>OBJECTIVE 1.2: Ensure the most efficient and up-to-date hardware that is available to Library customers and staff for the provision of services.</b>				
<b>Action Step</b>	<b>Timeline</b>	<b>Resources</b>	<b>Responsibility</b>	<b>Success Indicators/6-month Evaluation</b>

1.2.1. Deploy designated numbers of computers and laptops at Great Brook Valley Branch for public use.	FY2010	Gates Foundation grant	ADM, IT	
1.2.2. Explore a public printing authentication system for controlling users print payment that works with the existing Pharos computer reservation software.	FY2010-FY2011	Capital, OM	ADM, IT	
1.2.3 Implement a better copier solution to replace the poor service we have when the existing contract expires.	FY2010-FY2011	Capital, OM	ADM, IT	
1.2.4 Add two additional Self-checkout stations enabling library users to check materials out themselves.	FY2011	Capital, OM	ADM, IT	
1.2.5 Provide faxing capabilities and image scanning equipment for staff and library users.	FY2010-FY2011	Capital, OM	ADM, IT	
1.2.6 Maintain current computers and other equipment such as barcode scanning and thermal printer on a 4-year replacement cycle when possible.	Ongoing	OM, Trust Fund	ADM, IT	
1.2.7 Provide mobile computing hardware and laptops for staff and public use.	Ongoing	OM, Trust Fund	ADM, IT	
1.2.8 Replace aged projection systems in computer Lab and meeting rooms and increase staff availability to projectors for outreach purposes.	FY2012	Capital	ADM, IT	
1.2.9 Provide RFID/Self-check system for Frances Perkin Branch.	FY2011	Capital	ADM, IT	
<b>OBJECTIVE 1.3: Create a "wired" community which links Main Library, Frances Perkins Branch, Great Brook Valley Branch and the community with the world.</b>				
<b>Action Step</b>	<b>Timeline</b>	<b>Resources</b>	<b>Responsibility</b>	<b>Success Indicators/6-month Evaluation</b>
1.3.1 Use WebEx and interactive video system to access Library's training classes or workshops from other libraries and educational institutions throughout central region in Massachusetts.	FY2010, ongoing	OM	ADM, IT	
1.3.2 Work with Reference and Youth Divisions to identify and create interactive video programs.	FY2010, ongoing	Staff	IT, Ref & Youth Divisions	
1.3.3 Provide mobile videoconferencing/distance learning equipment to increase collaboration among the community.	FY2011	Capital	ADM, IT	
1.3.4 Add the interface capabilities for outward network connectivity by partnering with community colleges for content sharing.	FY2012	Capital	ADM, IT	
1.3.5 Implement a distance learning media lab equipped with an Interactive	FY2012	Capital	ADM, IT	

Video system including VCR/DVD, cameras and microphone.				
1.3.6 Provide more stable VPN access for staff at branches to Main Library's network.	Ongoing	OM	IT	
1.3.7 Continue working with City of Worcester on its I-Net replacement project.	Ongoing	ADM, IT		
1.3.8 Explore options to provide Library Board trustees access to Board documents and files from remote sites.	FY2011, ongoing	ADM, IT		
<b>OBJECTIVE 1.4: Develop a technology-based internal communications structure for all staff across three locations.</b>				
<b>Action Step</b>	<b>Timeline</b>	<b>Resources</b>	<b>Responsibility</b>	<b>Success Indicators/6-month Evaluation</b>
1.4.1. Upgrade Drupal platform to provide wiki, forum, and other features for improving in-house communication.	Ongoing	Staff	IT, all Divisions	
1.4.2. Explore mobile technology to enable roving reference.	Ongoing	OM	IT, all Divisions	
1.4.3. Continue making the transition from paper communications to electronic communications within the Library.	Ongoing	Staff	All staff	
1.4.4. Migrate from consortium e-mail system to deploy our own Microsoft Exchange e-mail system with appropriate staff training on new system.	FY2010	Trust Fund	ADM, IT	
1.4.5. Explore Vocera system to enhance staff communication to better serve Library users.	FY2012	Capital, OM	ADM, IT	
<b>OBJECTIVE 1.5: Provide necessary technology to make administration of the Library and its facilities more productive and cost effective.</b>				
<b>Action Step</b>	<b>Timeline</b>	<b>Resources</b>	<b>Responsibility</b>	<b>Success Indicators/6-month Evaluation</b>
1.5.1. Provide and maintain secure and monitored data center with a clean, accessible, and organized network and infrastructure layout in the Server Room.	Ongoing	As request	IT	
1.5.2. Explore systems that assist with recruitment and employee hiring, as well as staff management database.	Ongoing	OM	HR, IT	
1.5.3. Continue using online collection development tools with ILS Acquisitions function to ensure materials spending occurs on a regular schedule to allow for consistent delivery and processing of materials.	Ongoing	OM	Business Office, all Divisions	
1.5.4. Provide 3M tag reader for each cataloger to ensure that barcodes are	FY2011	Existing devices	IT, TS	

correctly read and entered into online catalog system.				
1.5.5. Purchase a wireless ready laptop with KLAS application installed to make collection maintenance (weeding and inventory) more efficient.	FY2010	TBL budget	TBL, IT	
1.5.6. Expand the security camera infrastructure as needs are identified, such as Audio-visual Area at Main Library to secure materials safety and reduce theft rate.	FY2010-FY2011	Capital, OM	Building	
<b>OBJECTIVE 1.6: Provide adequate staffing and equipment to handle technology needs.</b>				
<b>Action Step</b>	<b>Timeline</b>	<b>Resources</b>	<b>Responsibility</b>	<b>Success Indicators/6-month Evaluation</b>
1.6.1. Provide technology training and time for learning that is timely on the installation and maintenance of new hardware and software for IT staff.	Ongoing	OM	IT	
1.6.2. Provide adequate staffing for implementation and operation of computer network and web site maintenance.	Ongoing	OM	ADM	
1.6.3. Make sure the tech support is adequate for the technology needs of library staff and library users.	Ongoing	N/A	IT	
1.6.4. Select new software tools to maximize maintenance, monitor and support the Library's technology infrastructure.	Ongoing	OM	ADM, IT	
1.6.5. Continue exploring and offering opportunity for student interns to provide computer support as part of their intern/community service.	Ongoing	Staff	HR, IT	
1.6.6. Purchase high quality color printer for PR use and scanner for TS processing.	FY2011	Capital	ADM, IT, TS, Youth Div.	
1.6.7. Explore "Family computer stations" in Children Room, with webcam and color printer.	FY2011	Capital	Youth Div., IT	
1.6.8. Replace TBL PC monitors with 22" flat panel models as the present monitors fail.	FY2011	TBL budget	TBL, IT	
1.6.9. Explore methods for better protecting library computer equipment to avoid vandalism, especially hardware damage.	Ongoing	OM	IT	
<b>OBJECTIVE 1.7: Develop and evaluate computer related policies to ensure Library's use of technology and Internet is relevant and effective.</b>				
<b>Action Step</b>	<b>Timeline</b>	<b>Resources</b>	<b>Responsibility</b>	<b>Success Indicators/6-month Evaluation</b>
1.7.1. Review and revise library-wide Staff Computer Use Policy, including e-mail usage for staff signature.	Ongoing	Staff	ADM, HR, IT	

1.7.2. Investigate the need for a Social Networking Software policy to submit to Library Board.	FY2010	Staff	All Divisions	
1.7.3. Evaluate and revise existing computer related policies when needed.	Ongoing	Staff	All Divisions	
1.7.4. Develop new computer related policies and procedures as needed.	Ongoing	Staff	All Divisions	
1.7.5. Centralize and post new or updated policies and procedures on Staff Home Page and Library web site.	Ongoing	Staff	Management	
<b>OBJECTIVE 1.8: Develop file management and archival system.</b>				
<b>Action Step</b>	<b>Timeline</b>	<b>Resources</b>	<b>Responsibility</b>	<b>Success Indicators/6-month Evaluation</b>
1.8.1. Begin converting departmental files to electronic archival and management system.	FY2010	Staff	All Divisions/Depts	
1.8.2. Administrative support staff are training to electronically archive data files and hard copy records.	Ongoing	Staff	Assigned staff	
1.8.3. Eliminate 70% of paper records, files, etc.	Ongoing	Staff	All staff	
1.8.4. All Library records files are converted to electronic storage facility.	Ongoing	Staff	All staff	

<b>GOAL 2: Technology Resources</b>				
<b>To provide appropriate technology resources throughout the Library based on Library users' information needs.</b>				
<b>OBJECTIVE 2.1: Ensure equitable access to technology resources.</b>				
<b>Action Step</b>	<b>Timeline</b>	<b>Resources</b>	<b>Responsibility</b>	<b>Success Indicators/6-month Evaluation</b>
2.1.1 Oversee and evaluate Library technology utilization by Management Team every six months (Technology implementation evaluation).	Ongoing	Staff	Management	
2.1.2 Select appropriate resources for library users by subject specialists.	Ongoing	OM	Selectors	
2.1.3 Purchase English/Spanish preschool learning stations with bundled educational software for Main Library and two branches.	FY2010	Capital budget	ADM, IT, Youth Div.	
2.1.4 Purchase preschool computer workstations with preloaded software in Children Room, such as AWE stations or something similar.	FY2010	Capital budget	ADM, IT, Youth Div.	
2.1.5 Offer hand-held mobile device for staff to provide them access to resources from anywhere at the library.	FY2012	Capital budget	ADM, IT	
2.1.6 Pursue a data warehouse solution to standardize and coordinate collecting and reporting library statistics by using any information system and database management tool.	FY2010	Staff	IT	
<b>OBJECTIVE 2.2: Provide innovative technology services.</b>				
<b>Action Step</b>	<b>Timeline</b>	<b>Resources</b>	<b>Responsibility</b>	<b>Success Indicators/6-month Evaluation</b>
2.2.1 Continue investigating social networking applications and Library 2.0/3.0 technologies and implement them when feasible.	Ongoing	Staff	All Divisions	
2.2.2 Provide information literacy podcast and vodcast tutorials.	FY2010	Staff, existing devices	Ref & Youth Divisions	
2.2.3 Provide library services for mobile device users, such as text reference services – Ask a Librarian with 160-character answers, etc.	FY2011-FY2012	Staff, Capital, OM	ADM, All Divisions	
2.2.4 Review and replace current Computer Lab technology with updated information access tools.	Ongoing	Capital, OM	ADM, IT	
2.2.5 Explore options on laptop deployment for public use.	FY2012	Capital, OM	ADM, IT	
2.2.6 Upgrade software and plug-ins on computer workstations to maintain current applications and add new software when appropriate.	Ongoing	OM	IT	
2.2.7 Explore cost and benefit of adding computers to the library that use	Ongoing	OM	IT	

other operating systems besides Windows.				
2.2.8 Identify and meet all future assistive technology needs in the Library.	Ongoing	Capital, OM	ADM, IT	
2.2.9 Replace computer furniture and redesign computer work areas in three locations as needed.	Ongoing	Capital, OM	All Divisions	
2.2.10 Explore software applications to convert data from database format to web presentation, such as <i>Worcester Evening Post</i> indexing project.	FY2012	OM	IT, Ref. Div.	
2.2.11 Purchase new microform readers or upgrade the existing machines to provide users options to either print or scan texts/images and send them through e-mail or save to a flash drive.	FY2011	Capital, OM	ADM, IT	
2.2.12 Explore RFID technology for inventory purpose.	Ongoing	Capital, OM	ADM, IT	
2.2.13 Replace the aged OTC (Output Technology Corp.) LM2400 laser printer to improve the printing of TBL mailing cards.	FY2012	TBL budget	TBL, IT	
<b>OBJECTIVE 2.3: Ensure that the Integrated Library System is satisfactory to meet the growing customer population and use, the growth of the Library collection, and management needs.</b>				
<b>Action Step</b>	<b>Timeline</b>	<b>Resources</b>	<b>Responsibility</b>	<b>Success Indicators/6-month Evaluation</b>
2.3.1 Enhance the information available to library users through the library's catalog.	Ongoing	Staff	All Divisions	
2.3.2 Continue cleaning up Library's online catalog database in every aspect.	Ongoing	Staff	All staff	
2.3.3 Utilize the ILS system functionality to its fullest.	Ongoing	Staff	All staff	
2.3.4 Explore the option to integrate OCLC ILL self-service through the library's catalog.	Ongoing	Staff	Circulation	
2.3.5 Investigate costs and benefits of joining C/WMARS consortium migration plan by moving from Innovative Interfaces system to an open source ILS system.	FY2011-FY2012	OM	ADM, all Divisions	
2.3.6 Explore options for Library's own ILS system (initial costs, migration cost, and annual maintenance costs).	FY2011-FY2012	Capital, OM	ADM, all Divisions	
2.3.7 Work with C/WMARS to investigate upgrading to a fiber optic line between the Main Library and the consortia.	Ongoing	Staff	ADM, IT	
2.3.8 Ensure the compatibility between RFID/self check system at Frances Perkins Branch and existing ILS system.	FY2011-FY2012	Capital, OM	AND, IT	
2.3.9 Work with C/WMARS to investigate upgrading to a T1 line between	Ongoing	Staff	ADM, IT	

the Frances Perkins Branch Library and the consortia.				
2.3.10 Explore provision of mobile OPAC interface with SMS services for renewals, overdue, notifications, etc.	Ongoing	ILS System	ADM	
2.3.11 Purchase new or relocate staff and OPAC ports for Frances Perkins Branch Library and Great Brook Valley Branch Library.	Ongoing	OM	ADM, IT	
2.3.12 Re-visit online receiving with pop-up item entry to be integrated with existing materials processing workflow to create a paperless procedure.	Ongoing	Staff	TS	
2.3.13 Explore adding Ask A Librarian link right on the OPAC so that when a patron does a catalog search and is not successful, they can they click on Ask A Librarian and get help.	FY2011	Staff	ADM, IT, C/W MARS	
2.3.14 Add all databases on to the EZproxy system whenever possible.	Ongoing	Staff	ADM, IT, C/W MARS	
<b>OBJECTIVE 2.4: Expand the scope and functionality of the Library's web site and staff home page.</b>				
<b>Action Step</b>	<b>Timeline</b>	<b>Resources</b>	<b>Responsibility</b>	<b>Success Indicators/6-month Evaluation</b>
2.4.1 Use Library home page as a portal to enhance the effective use by users as well as to improve two-way communication with users.	Ongoing	OM	All Divisions	
2.4.2 Use appropriate technology to effective communication with library users, such as e-newsletter, RSS feed, etc.	Ongoing	OM	All Divisions	
2.4.3 Continue exploring the options of creating library profiles on social web sites to promote library services.	Ongoing	OM	All Divisions	
2.4.4 Incorporate changes based on results of usability studies and informal surveys, redesign as needed.	Ongoing	OM	All Divisions	
2.4.5 Provide dynamic interactive web technology to give users a timely response, such as patron suggestions, materials purchase request, online patron registration for classes and programs.	Ongoing	OM	IT, All Divisions	
2.4.6 Provide rich content and continuously updated information on library's web site.	Ongoing	OM	IT, All Divisions	
2.4.7 Continue improving Staff Home Page as an intranet to improve staff communication.	Ongoing	OM	IT	
2.4.8 Optimize Library web site for mobiles.	FY2011	OM	IT, All Divisions	

<b>GOAL 3: Customer Services</b>				
<b>Provide creative, skilled, and motivated technology staff and excellent customer services.</b>				
<b>OBJECTIVE 3.1: Assess and improve library-sponsored programs for patrons of all ages.</b>				
<b>Action Step</b>	<b>Timeline</b>	<b>Resources</b>	<b>Responsibility</b>	<b>Success Indicators/6-month Evaluation</b>
3.1.1 Offer library programs via Internet, such as podcasting, vodcasting (YouTube), screencasting (Camtasia) and photo sharing (Flickr).	Ongoing	Staff	All Divisions	
3.1.2 Develop online book discussion through social web format, such as blog, wiki, etc.	Ongoing	Staff	Ref. & Youth Divisions	
3.1.3 Enhance delivery of reference and information services by informing users in an effectively and timely way as new technologies are adopted, such as Twitter.	Ongoing	Staff	Ref. & Youth Divisions	
<b>OBJECTIVE 3.2: Use technologies to improve customer service for staff and the public.</b>				
<b>Action Step</b>	<b>Timeline</b>	<b>Resources</b>	<b>Responsibility</b>	<b>Success Indicators/6-month Evaluation</b>
3.2.1. Explore staff use of emerging technologies, such as handheld devices and audio communication devices, to enhance service to library users.	FY2011	Capital, OM	ADM, IT	
3.2.2. Work with C/W MARS to investigate the use of handheld OPAC (AirPAC).	FY2011	OM	ADM, IT	
3.2.3. Expand ways people can access library services remotely, e.g. self-registration for library cards.	FY2011-FY2012	OM	ADM, IT	
3.2.4. Implement a more robust automated version of staff scheduling system with web access capabilities.	FY2010	OM	All Divisions	
<b>OBJECTIVE 3.3: Increase and improve electronic services available to the public.</b>				
3.3.1. Identify users' needs and purchase improved online databases and/or e-journals.	2010	OM	Ref. Division	
3.3.2. Support remote access to subscription databases.	Ongoing	OM	All Divisions	
3.3.3. Work with other local libraries, regional office and Statewide Database Project to investigate available databases.	Ongoing	OM	All Divisions	
3.3.4. Evaluate current CD-ROM reference and online subscription resources to determine the best resources to provide to the public.	Ongoing	OM	Ref. Division	

3.3.5. Provide OCLC WorldCat for use by all Worcester residents when feasible.	Ongoing	OM	ADM, all Divisions	
<b>OBJECTIVE 3.4: Provide Library customers with user friendly services that are pertinent, accessible, and useful.</b>				
<b>Action Step</b>	<b>Timeline</b>	<b>Resources</b>	<b>Responsibility</b>	<b>Success Indicators/6-month Evaluation</b>
3.4.1. Provide automated customer signup and print control for Internet computer usage.	FY2010-FY2011	Capital, OM	ADM, IT	
3.4.3. Improve public access to online databases and reference content as well as public computer access as well.	Ongoing	OM	All Divisions	
3.4.4. Explore selling USB drives instead of floppy disks by Friends of the Library and 2nd floor Reference Desk for public use.	FY2010	N/A	ADM	
3.4.5. Provide staff training on troubleshooting of self-check stations as well as promote the use of self-checkout service by library users.	Ongoing	N/A	All staff	
3.4.6. Explore installing kiosks in Worcester community for Library information access.	FY2012	Capital, OM	ADM, IT	
3.4.7. Provide Fax and image/text scanning services for the public.	FY2012	Capital, OM	ADM, IT	
3.4.8. Provide resources to develop web-based courses and enrichment resources to Worcester community and businesses.	Ongoing	OM	All Divisions	
3.4.9. Explore options to issue library cards off site as part of outreach programs.	FY2012	Capital, OM	ADM, IT	
3.4.10. Add additional 15-minute Express Computers for adults users at Frances Perkins Branch.	FY2010	OM	IT	
3.4.11. Explore suitable public Internet sign-up software for Frances Perkins Branch computer users.	FY2011	OM	IT	

<b>GOAL 4: Staff Development</b>				
To develop and support staff development programs that creates a community of learners that competently and effectively use and manage technology resources.				
<b>OBJECTIVE 4.1: Ensure that all staff will be technology and information literate and competent.</b>				
Action Step	Timeline	Resources	Responsibility	Success Indicators/6-month Evaluation
4.1.1 Establish standards and assessment measures for staff in technology and information literacy.	Ongoing	Staff	HR, IT	
4.1.2 Incorporate technology competencies for staff into hiring procedure and criteria for tenure.	Ongoing	Staff	HR	
4.1.3 Increase technology training programs for staff to upgrade their technology skills and enhance their effectiveness.	Ongoing	Staff	All Divisions	
4.1.4 Provide technology training that is timely on the installation and maintenance of new hardware and software for staff.	Ongoing	Staff	IT	
4.1.5 Maximize use of staff development days for technology training.	Ongoing	Staff	All Divisions	
4.1.6 Train and educate staff in the implementation of specific assistive technologies.	Ongoing	Staff	TBL, IT	
<b>OBJECTIVE 4.2: Provide ongoing staff development training to enhance administrative technology skills.</b>				
Action Step	Timeline	Resources	Responsibility	Success Indicators/6-month Evaluation
4.2.1 Provide staff with appropriate, ongoing job related training in order to use the integrated library computer system at its optimal level.	Ongoing	Staff	All Divisions	
4.2.2 Provide staff with appropriate, ongoing job-related training necessary to use Internet and other electronic resources to their greatest potential.	Ongoing	Staff	All Divisions	
4.2.3 Provide staff with appropriate, ongoing job-related training necessary to perform routine PC and printer maintenance, and to use miscellaneous equipment such as scanners and AV items.	Ongoing	Staff	All Divisions	
4.2.4 Provide training for staff on use of blogs, wikis, RSS feeds, podcasts, vodcasts, and any of web 2.0 tools for information dissemination.	Ongoing	Staff	All Divisions	
4.2.5 Use videoconferencing equipment to provide staff with training and continuing education possibilities.	FY2011-FY2012	Staff	All Divisions	

<b>GOAL 5: Information Access</b>				
<b>To provide all residents of Worcester access to worldwide resources in each Worcester Public Library location.</b>				
<b>OBJECTIVE 5.1: Use online technologies to enhance communication between all Library stakeholders.</b>				
<b>Action Step</b>	<b>Timeline</b>	<b>Resources</b>	<b>Responsibility</b>	<b>Success Indicators/6-month Evaluation</b>
5.1.1 Explore new methods of networking and resource sharing with neighboring university and college libraries, CMRLS, and Nelinet using advanced telecommunication capabilities and the Internet.	Ongoing	Staff	All Divisions	
5.1.2 Redesign Library web site as a major information/learning tool for staff and library users.	Ongoing	Staff	All Divisions	
5.1.3 Provide web presence for designated staff as a tool to communicate with the Worcester community.	Ongoing	Staff	All Divisions	
5.1.4 Provide online newsletters through 3 <sup>rd</sup> party vendors and in-house generation to expand the use of Library web pages.	Ongoing	Staff	All Divisions	
5.1.5 Conduct annual review of effectiveness and efficiency of information access initiatives.	Ongoing	Staff	All Divisions	
5.1.6 Web 2.0/3.0 tools will be used to expand access to Library resources by 24x7 beyond the Library open hours.	Ongoing	Staff	All Divisions	
5.1.7 Provide online program registration from home.	FY2010	Staff	IT	
<b>OBJECTIVE 5.2: Assure staff and Library users timely access to print and non-print materials, electronic resources, and online databases.</b>				
<b>Action Step</b>	<b>Timeline</b>	<b>Resources</b>	<b>Responsibility</b>	<b>Success Indicators/6-month Evaluation</b>
5.2.1 Provide training for the public on skills and techniques for accessing electronic information (online databases, e-mail, surfing web, MS Office) by Library staff in order to develop self-reliant library users.	FY2011-FY2012	Staff	Ref. & Youth Divisions	
5.2.2 Provide instruction to the public as new technologies are implemented.	Ongoing	Staff	Ref. & Youth Divisions, IT	
5.2.3 Offer computer instruction and assistance to the public through instructional brochures and handouts and individual instruction sessions.	FY2011-FY2012	Staff	Ref. & Youth Divisions, IT	
5.2.4 Provide instruction for the public on using web-based online catalog to search for materials, to place holds, to renew items, and to place	FY2011-FY2012	Staff	Ref. & Youth Divisions	

	purchase and interlibrary loan requests.				
5.2.5	Have periodicals union list migrate to new MARC Holdings Format (MFHD) to provide accurate periodicals holdings through online catalog.	FY2010-FY2011	Staff	Periodicals	
5.2.6	Make microform collection and valuable closed stack resources accessible through OPAC and Library web site.	FY2010-FY2012	Staff	TS, Periodicals	
5.2.7	Develop partnerships with community agencies to expand training beyond the library.	Ongoing	Staff	All Divisions	
5.2.8	Work with Worcester educational community to maximize use of its technology resources in Library facilities, such as to deliver programs at the Library over the interactive video network/Internet 2.	Ongoing	Staff	All Divisions	
<b>OBJECTIVE 5.3: Provide Worcester community access to Library bountiful and valuable resources.</b>					
	<b>Action Step</b>	<b>Timeline</b>	<b>Resources</b>	<b>Responsibility</b>	<b>Success Indicators/6-month Evaluation</b>
5.3.1.	Revisit the C3 de-cutting project to decrease exceptions to provide consistent access to library materials in the library's catalog.	Ongoing	Staff	All Divisions	
5.3.2.	Identify, weed, and make any of existing print and non-print materials currently not in the library's catalog accessible through the catalog.	Ongoing	Staff	All Divisions	
5.3.3.	Implement more effective, efficient, and economical methods of materials acquisitions, cataloging and processing through technology.	Ongoing	Staff	TS	
5.3.4.	Explore options of OCLC batch loading services to make the holding data up-to-date between the OCLC and C/W MARS databases.	Ongoing	Staff	ADM, TS	
5.3.5.	Use technology to automate and expedite the inventory process of library materials.	Ongoing	Staff	All Divisions	
<b>OBJECTIVE 5.4: Improve electronic access to library resources by digitizing identified collections.</b>					
	<b>Action Step</b>	<b>Timeline</b>	<b>Resources</b>	<b>Responsibility</b>	<b>Success Indicators/6-month Evaluation</b>
5.4.1.	Evaluate the C/W MARS Digital Treasures pilot project for continuous participation.	FY2010	OM	ADM, all Divisions	
5.4.2.	Explore options of participation in various regional depositories to participate in the Digital Commonwealth.	Ongoing	OM	ADM, all Divisions	
5.4.3.	Make Worcester historic materials and genealogy resources accessible and available through digitization:	FY2011-FY2012	Capital, OM	ADM, all Divisions	

5.4.3.1. Develop a permanently maintained plan and appropriate actions that preserve library valuable collections in Worcester Room and basement.	FY2011	Grant	Library Foundation, All Divisions	
5.4.3.2. Allocate funding to preserve Worcester's historic materials	FY2012	Grant	ADM, Library Foundation	
5.4.3.3. Digitize identified materials.	FY2012	Staff	IT, TS	
5.4.3.4. Improve accessibility by cataloging digitized materials in OPAC.	FY2012	Staff	TS	
5.4.3.5. Provide web access for digitized collection.	FY2012	Staff	IT, TS	
<b>OBJECTIVE 5.5: Develop a community outreach plan to promote the Library's electronic services and resources to the public.</b>				
<b>Action Step</b>	<b>Timeline</b>	<b>Resources</b>	<b>Responsibility</b>	<b>Success Indicators/6-month Evaluation</b>
5.5.1. Develop a marketing plan through Library's web site to promote Library's services and resources to the public.	Ongoing	OM	ADM, PR	
5.5.2. Investigate the use of mail delivering system or kiosks for requested library materials.	FY2012	Capital, OM	ADM, all Divisions	
5.5.3. Explore and adopt emerging technology to assist the library marketing plan for library events promotion.	FY2010	Capital, OM	ADM, IT	
5.5.4. Seek productive ties with schools, governments and other organizations for collaboration in technology.	Ongoing	Capital, OM	ADM, all Divisions	
5.5.5. Participate in City's broadband service contract renewal and share telecommunications dark fiber infrastructure with City.	Ongoing	Staff	ADM, IT	

**GOAL 6: Funding**

To obtain local, state, federal, and private funding resources for technology initiatives.

**OBJECTIVE 6.1: Plan, monitor and establish guidelines for obtaining and distributing funding for technology.**

Action Step	Timeline	Resources	Responsibility	Success Indicators/6-month Evaluation
6.1.1 Secure and allocate adequate funding for technology expenditures from tax levy and capital funding at the beginning of each fiscal year.	Ongoing	Staff	ADM, Business Office	
6.1.2 Identify likely sources of funding for select technological projects.	Ongoing	Staff	ADM, IT	
6.1.3 Maintain good practices and procedure for computer equipment acquisitions, software renewal and maintenance plan.	Ongoing	Staff	Business Office, IT	
6.1.4 Secure adequate funding to finance staff training, computer repair and replacement, telecommunication expense, and automated system maintenance.	Ongoing	Staff	ADM, Business Office	

**OBJECTIVE 6.2: Seek out, identify and obtain appropriate grant and funding resources.**

Action Step	Timeline	Resources	Responsibility	Success Indicators/6-month Evaluation
6.2.1 Work with Friends of the Library, Foundation and other organizations to seek funding resources.	Ongoing	Staff	ADM, IT	
6.2.2 Explore funding for technology training and staff development.	Ongoing	Staff	ADM, Library Foundation	
6.2.3 Explore decision to apply e-rate funding to offset telecommunication costs.	Ongoing	Staff	ADM, IT, Business Office	

**TECHNOLOGY PLAN BUDGET**

This table is not intended to be a final budget, but rather a reasonable reflection of the planning process the library has put into place for our ongoing technology needs for the next three years.

Category	FY2009 expenditures	FY2010 projected*	FY2011 projected*	FY2012 projected*
Network Infrastructure and Security	\$194,182.00	\$10,000.00	\$19,600.00	\$20,000.00
ILS System and Telecommunications	\$120,000.00	\$118,724.00	\$124,660.20	\$130,893.21
Basic Maintenance & Services	\$21,000.00	\$26,500.00	\$27,825.00	\$29,216.25
Computer hardware and software	\$22,750.00	\$22,000.00	\$34,500.00	\$47,500.00
New Initiatives (E-mail system, Videoconferencing, etc.)	—	\$26,800.00	\$93,738.00	\$264,385.00
Miscellaneous Supplies and Other Expenditure	\$15,214.50	\$8,450.00	\$7,400.00	\$9,900.00
Professional Development (Staff Training & Education)	\$10,000.00	\$10,000.00	\$10,000.00	\$10,000.00
<b>TOTALS</b>		\$222,474.00	\$317,723.20	\$511,894.46

\*Funds may be sought from capital funding, Library ordinary maintenance budget, grant funds, Federal and State aid and stimulus programs, Library Trust Funds, Library and/or private Foundations, Friends of the Library and private individual donors.

## **TECHNOLOGY PLAN EVALUATION**

The FY2010-FY2012 Technology Plan of Worcester Public Library is a direct reflection of the Library's strategic plan that is revised and evaluated on a regular basis. Therefore this plan may have some additions and/or alterations accordingly.

The Technology Plan will be reviewed, evaluated and prioritized every six months through meetings of the Technology Plan Committee, which consist of all management team members. This committee is charged to gather, organize, and document the issues related to technology and the technology plan. The Committee is also responsible for recording the activities and progress under each step of goals and objectives to a column called "Success Indicators/6-month Evaluation", which then can be used for plan modification and alteration during evaluation periods. The primary control is facilitated by the Information Technology Department under Technology Division; however, it is through the Libraries core management team for final decision. The plan is considered a working document and will be monitored and adjusted to accommodate the fast paced arena of technology in an attempt to afford Worcester Public Library users the best possible services. The Library's Annual Survey in February, the Library users' input and staff suggestions will allow us to determine the need for revisions to the plan as well as to evaluate the effectiveness and success in implementation of the new initiatives put forth by this plan. All staff will have access to the plan and its revisions through the Library's Intranet – Staff Home Page.

The primary barriers in meeting the plan are financial cutbacks and insufficient staff -- based on past years' experience. If such situations occur, there will need to be concomitant reductions in the budget and related services.

## **CONCLUSION**

The Worcester Public Library will, as library finances permit, add technology to be used as a tool to help provide information and services for the enrichment, education, and life-long learning of the people of the city of Worcester and of the central Massachusetts region.

To MBLC

TO THE MASSACHUSETTS BOARD OF LIBRARY COMMISSIONERS:

Attached is the Worcester Public Library 3-year Technology Plan for FY2010-FY2012. If you have any questions regarding the plan, please contact Wei Jeng-Chu, Technology Division Head at 508-799-1726 or e-mail at [wjengchu@cwmars.org](mailto:wjengchu@cwmars.org).



Signed \_\_\_\_\_ 6/30/2009 \_\_\_\_\_  
Lucy B. Gangone, Head Librarian                      Date  
Worcester Public Library

**APPENDIX**

- Equipment Assessment
- Budget Worksheet

- Equipment Assessment

INVENTORY	MAIN BRANCH	FRANCES PERKINS BRANCH	GREAT BBRROK VALLEY BRANCH	FY 2010 PROJECTED	FY 2011 PROJECTED	FY 2012 PROJECTED
Infrastructure - Cabling & connections	Cat. 5e & fiber backbone	Cat 5	Cat 5	more cables to server room		
Workstations	Approx 275 PCs – staff and public	13 PCs mixed	6 PCs mixed	30 PCs replacement (10%)	50 PCs replacement (18%)	70 PCs replacement (25%)
Scanners	5			Add 1		
Servers	17 Win2003 servers 2 Win2008 servers			2 servers	2 servers	2 servers, 1 web server
Routers	2	1	1			
Firewall	2 (one as backup)				3 (2 for branches)	
Switches & Hubs	11 switches	1 switch and 1 hub	1 switch			
Printers	54 printers (stand alone & networked)	2	1	Replace 1 at GBV & add 1 color at ML	Replace 4 printers	Replace 4 printers
Public Vended Printers	5 under contract					
Software	Various	Various	Various	Various	Various	Various
Privacy Monitors	70					
Telephones	68	3	2			
TDD	2					
Fax Machines	5	1	1			
Wireless Phones	2	2				
Telephone Lines	93	4	1			
Cellular Phones	10					
Two-way Radios	10					

• Budget Worksheet

Item	Unit Price	2010 Qty	2010 Cost	2010 Total	2011 Qty	2011 Cost	2011 Total	2012 Qty	2012 Cost	2012 Total
<b>Network Infrastructure and Security</b>										
Server Replacement	\$5,000.00	2	\$10,000.00	\$10,000.00	2	\$10,000.00		4	\$20,000.00	\$20,000.00
Firewall	\$3,200.00				3	\$9,600.00	\$19,600.00			
<b>ILS System and Telecommunications</b>										
ILS	\$107,424.00	1	\$107,424.00							
Charter Cable	\$400.00	12	\$4,800.00							
Other Expenditure	\$6,500.00	1	\$6,500.00	\$118,724.00	1.05	\$124,660.20	\$124,660.20	1.05	\$130,893.21	\$130,893.21
<b>Basic Maintenance &amp; Services</b>										
MGE	\$4,000.00	1	\$4,000.00							
3M/Checkpoint	\$13,000.00	1	\$13,000.00							
Pharos	\$2,000.00	1	\$2,000.00							
Software renewal	\$7,500.00	1	\$7,500.00	\$26,500.00	1.05	\$27,825.00	\$27,825.00	1.05	\$29,216.25	\$29,216.25
<b>Computer hardware and software</b>										
Replacement PC	\$650.00	30	\$19,500.00		50	\$32,500.00		70	\$45,500.00	
Scanner	\$1,500.00	1	\$1,500.00			\$0.00			\$0.00	
Software	\$1,000.00	1	\$1,000.00	\$22,000.00	2	\$2,000.00	\$34,500.00	2	\$2,000.00	\$47,500.00
<b>New Initiatives (E-mail system, Videoconferencing, etc.)</b>										
Exchange E-Mail System	\$19,000.00	1	\$19,000.00							
WebEX	\$7,800.00	1	\$7,800.00	\$26,800.00						
Videoconferencing I	\$28,860.00				1	\$28,860.00				
Videoconferencing II	\$264,385.00							1	\$264,385.00	\$264,385.00
RFID system for FPBL	\$59,678.00				1	\$59,678.00				
AirPAC (PDA for catalog)	\$650.00		\$0.00		8	\$5,200.00	\$93,738.00		\$0.00	
<b>Miscellaneous Supplies and Other Expenditure</b>										
Printer (B&W)	\$400.00	1	\$400.00		4	\$1,600.00		4	\$1,600.00	
Printer (Color)	\$3,500.00	1	\$3,500.00			\$0.00			\$0.00	
Barcode Scanner	\$200.00	2	\$400.00		2	\$400.00		2	\$400.00	
Receipt Printer	\$200.00	2	\$400.00		2	\$400.00		2	\$400.00	
Misc.	\$250.00	15	\$3,750.00	\$8,450.00	20	\$5,000.00	\$7,400.00	30	\$7,500.00	\$9,900.00
Professional Development				\$10,000.00			\$10,000.00			\$10,000.00
<b>TOTALS</b>				\$222,474.00			\$317,723.20			\$511,894.46