TECHNOLOGY ASSESSMENT FOR YOUR LIBRARY

Most information in this assessment toolkit is taken from the **MaintainIT Project:**

The Joy of Computing – Planning for Success Toolkit

http://techsoupforlibraries.org/files/Planning%20for%20Success%20Toolkit.pdf

...from the Introduction: The "Joy of Computing — Planning for Success" is a guide for the over-worked librarian. Comprehensive in scope, this online resource brings together the most current ideas and best practices for planning, building, and managing your library's computer technology. "Planning for Success" is not intended to turn you into a networking guru. Its sole purpose is to give you the details you need to know to get your library's technology up and running properly, sustain its growth, and ensure its viability.

Technology Assessment Checklist (**Page 12 MaintainIT: *Planning for Success Toolkit***)

When you're creating a technology assessment, this list of what's included in a technology assessment to help you to get started.

- What technology skills does your staff possess? How much do they know about different hardware and software topics
- Do you have any written policies relating to staff and public use of technology? Do you have any informal, unwritten policies?
- What are your procedures and policies with relation to data backup, computer security, purchasing, change requests, tech support, etc.
- What's the current state of your ILS, your Web site, your local network, your Internet connection, and other key technologies? Are there any weaknesses or threats that need to be addressed?
- Who do you turn to for advice about technology?
- Who are your technology vendors and sales representatives?
- Who provides your Internet connection? How fast is that connection? What sorts of networking equipment (routers, switches, firewalls) do you have?
- What are the major technology services you provide to your patrons? Do you offer one-on-one or classroom-based technology training?
- Are you currently working on any new technology projects or services?
- A technology inventory.

Video game: A video game is an electronic game that involves interaction with a user interface to generate visual feedback on a video device. The electronic systems used to play video games are known as platforms: examples of these are personal computers and video game consoles. These platforms range from large computers to small handheld devices.

- **Points to take into consideration for video gaming in libraries.**

Technology Skills Staff Possess

Staff technology skills (and volunteers and trustees) as a continuous priority. Make learning an expected part of everyone's work routine. Find ways to teach one another and to help keep each other appraised of changes and ideas. This culture of learning will help alleviate some of the stress around not feeling "caught up". The reality is, there will always be more to learn. Try to embrace this thought and even make it fun!

Application / Hardware	Staff Name	Staff Name	Staff Name
Example: Understands printing from Internet Explorer			
Example: Has played World of Warcraft			
An understanding of computer user accounts and how they limit or grant access to various pieces of the computer's operation (e.g., an administrator should have the ability to change other users' passwords, but regular users should not be able to do this).			
The setup and functioning of CybraryN and Cybrary Print			

Use Teen groups or volunteers who may posses skills and expertise in gaming equipment and games themselves.

Page 17-20 (MaintainIT: *Planning for Success Toolkit)* gives examples and links to places to learn about technology.

Written Policies and Informal Policies

Acceptable Use Policy – items affecting use of computer(list) *DATE:*
Example: Parents and/or legal guardians are responsible for monitoring the Internet activity and choice of workstations by minors. Filtering software does not replace the need for parental guidance.

Public computer use *Date:*
Limitations on Use: Time limits, bandwidth limits, no FTP, no telnet, no streaming content. Do you offer printing? Web-based email only (no SMTP server)?
Filtering:

Wireless computer use *Date:*
Limitations on Use: Time limits, bandwidth limits, no FTP, no telnet, no streaming content. Do you offer printing? Web-based email only (no SMTP server)?
Filtering: Note if the wireless access is filtered, especially if the in-house is not, or is only partially filtered (filter by patron choice only, for instance). You may want to quote any law (CIPA) relating to this in brief.
Support: Will your library staff provide help with patron laptops? Can they provide help with determining if there is a signal present (i.e., if the application programs are working)? If you don't want staff touching patron laptops due to liability, say so.

Donation of equipment	*Date:*

Disposal of equipment	*Date:*

Data Privacy Policy	*Date:*

Security & Password Policy	*Date:*

Other

Do you currently have any policies prohibiting gaming in your library? Do you prohibit chat? Many Internet Video games come with a chat component. Do you filter any gaming sites due to bandwidth constraints? Do you require a parent or guardian is present when children are on computers? Do you require a parent or guardian signature for internet use or gaming?

Procedures and Policies for data backup, computer security, change request and technical support, upgrades, internet down time

Situation	How is it handled – method and how often
Wireless Network Security – Do you have a disclaimer about the possibility of radio signals being intercepted? Also include "library is not responsible for lost data due to network failure" and "beware of viruses" and "be careful about transmitting your personal information on an open network"	
Wireless Network Availability – Note that they may lose signal at random and the library takes no responsibility for lost data, etc.	
Vulnerabilities – Patron can access the staff network	
Where do you keep your patron data, circulation records, financial documents, staff documents and critical databases? Have a list of mission-critical data collection in your library, where they are stored, how they're backed up and who has access to them.	
Are your servers that connect directly to the internet secure: (web servers or email servers).	
Who has keys to your building? Are there locks on your server room? Who has keys to that room? Do you have any computers in far off corners of the library where your staff has a hard time seeing them? If you check out laptops and other equipment to the public, have you thought about theft-prevention?	
Backups – How is information backed up and are backups tested on a regular basis	
You're using week passwords – on staff computers or Administrator logins	
Social engineering – Does staff understand about not giving out passwords to individuals they do not know. What is your library policy about handing out passwords? Do you have your passwords written down by your machine or in a desk drawer? Are passwords for vital resources placed in a secure area so others have access should they be needed?	
Does your network have a firewall?	
How do you handle requests from Patron's who would like additional software added to your public machines, or to have access to a site they maybe filtered, or inaccessible?	
How do you handle technical support? Have a	

reference manual to turn to, call a help desk, try fixing it yourself, and leave a repair not on machine?	
How often do you do upgrades to your machines: Windows Updates; Java; Antivirus; Adobe; Flash; Shockwave; etc. How do you handle doing these updates? How do you handle hardware updates of new RAM, printers, etc.?	
Internet Down Time – How do you notify patrons that the Lab, Public Machines will be down? What happens when the Internet goes down who do you contact? How do you determine if it is your library only or a complete outage in an area?	
Internet Down Time for Staff – How do staff continue to function with there day to day routine?	
Technology Plan include information on how often equipment will be replaced, new technologies that will be used, etc.	
Technology Budget includes information about how much money will be spent on technology? Does the budget include looking at Total Cost of Ownership **(pages 15 & 16, Toolkit)**: increase staff time for new technology; more electricity; additional software; is USF affected by purchase?	
Disaster Recovery Plan – to you have one?	

- Do you have any procedures or policies on gaming? Do you have instructions for setting up equipment? Do you have instructions for turning off filtering to allow gaming? Do you allow patrons to bring their own games into the library for playing?

What is the current state of your circulation system (ILS), Web Site, Local Network, Internet Connection and other Key Technologies?

System	Status
ILS – is it on the current release	
Web Site – is it updated, is it easy to update, is it easy to navigate by patrons?	
Local Area Network – Switches versus hubs. What is their thru-put (10/100, Gig)	
Local Area Network - *Phantom Traffic* - *Stuttering NIC* – a combination of NIC and driver which may cause packet stutter. *Problem Routers* – overloaded routers, routers doing filtering after a network attack which weren't designed to handle these problems *TCP congestive avoidance* – persistent low-level loss, particularly on paths with large delays, can cause the protocol to be throttled down, even though there is very little traffic *Retransmission from an application* – wireless media is well-known to be lossy this way. *Traffic and apparent traffic* – stranded bandwidth is generated when an application does not have full capacity it needs.	
Internet Connection – DSL, Cable, T1 or fiber What is your bandwidth thru-put up and down	
Bandwidth testing – to determine what your true bandwidth is test when know one else is on your network and it is not doing any updates. http://www.speakeasy.net/speedtest/ http://www.speedtest.net/ http://www.bandwidth.com/tools/speedTest/ (run more than one)	
Requirements for Software – some gaming requires Java, flash, and shockwave	

- Bandwidth requirements:

Activity	File Size	Bandwidth transferred on a T1 connection web page used (http://www.ibeast.com/content/tools/band-calc.asp)
Text e-mail no attachment	2 k	0.019531 mb / < 1 second
E-mail with a 1 mb attachment to 10 people	2 k along with 1 mb	1.010742 mb / 5 seconds
Medium resolution photograph	500 k	0.488281 mb / 2 seconds
High resolution photograph	2.5 mb	2.5 mb / 13 seconds
MP3 music file 5 minutes long	5 mb	5 mb / 27 seconds
60 second video clip	10 mb	10 mb / 54 seconds
Movie – DivX format	700 mb	700 mb / > 1 hour
Connection to Automated Library Service (SIRSI Workflows)	40 k	0.0390625 / < 1 second
VoIP 20 – 80 kb	60 k	0.05859375 / < 1 second
MySpace 75- 100 kb	100 k	0.09765625 / < 1 second
Yahoo.com	70 k	0.05859375 / < 1 second
Google.com	30 k	0.02929687 / < 1 second
Cnn.com	200 k	0.1953125 / 1 second
Skype – Video Conferencing 128 - 256	256 k	0.25 / 1 second
Runescape or World of Warcraft	3 mb	3 mb /16 seconds
Video Conference - Speed plus 20% a 384 kbs connection would use 460 kbs	460 k	0.44921875/2 seconds
Telnet, citrix, NetMeeting	1 k	0.0009765625 / < 1 second
FTP (large file)	64 k	0.0625 / < 1 second
WeatherBug	1 k	0.0009765625 / < 1 second
Yahoo Messenger	1 k	0.0009765625 / < 1 second
AOL Instant Messenger	1 k	0.0009765625 / < 1 second
uTube, YouTube avg video 20mb	20 mb	20 mb/ 1 minute 48 seconds

Example using the above chart:
Example 1: A library wants to know if Runescape is using most of their bandwidth. While a player is using the game they are downloading 3 mb of data and it takes 16 seconds. During this 16 seconds no one else will be able to connect to anything on the internet.
Example 2: A library wants to know how many public machines they can have if they all connect to CNN. CNN uses 200 k which uses approximately 20 % of their bandwidth. This means they can have 5 machines connecting at one time at the same second.
Example 3: No library has all machines connecting at the exact time so maybe a better way to look at this is to take a 30 second period (most delay you want to allow). So say you have 5 patrons on an IM (5 seconds using less than 1 %), one person doing a simple video conference (2 seconds using 45 %), 2 people on My Space (2 seconds using 20%), and 6 people connecting to yahoo (6 seconds using 36%). This would give you 14 people all active during a 30 second time using about 102% of the bandwidth.

Who do you turn to for advice about technology?

Use http://www.cnet.com and http://www.mysimon.com for reviews and price comparisons. Have a basic computer requirement: Dual Processor; 1 gig Ram, Hard drive size; software; operating system. Use possible discounts. Buying hardware and software checklist on page 49-52. Software comparison chart pages 39-40. **(MaintainIT: *Planning for Success Toolkit)***

- Requirements for MMOPRG: Windows XP or Vista with Service Packs; Dual-core processor (Pentium D or AMD Athlon 64 x2; 1 GB Ram (Vista 2 GB Ram); Video Card – 3D graphics processor with Vertex and Pixel Shader with 128 MB VRam, such as an ATI Radeon X1600 or NVIDIA GeForce 7600 GT card or better' DirectX-compatible sound card or motherboard sound capability; 15 GB free hard drive space per game.

Who are your technology vendors and sales representatives?

10 steps to successfully working with vendors (pages 44-46) **(MaintainIT: *Planning for Success Toolkit)***
Do you purchase equipment or software off of State, County or group purchasing? Have you reviewed Techsoup for software and refurbish hardware purchases? www.techsoup.org

Type of Equipment	Vendor Name/Phone Number/Email

What are the major technology services you provide to your patrons?

The continued development of patron skills. Some people come to the library with strong technology skills and high expectations. Find ways to stay aware of popular tools and "gadgets". Are you noticing a lot of people carrying iPods or other MP3 players? Ask questions and pay attention to the uses. There is also a need, however, to always look at the gaps. Who does not know about technologies that could potentially benefit them? What role can the library play in closing that gap?

Service	Frequency
Example: One-on-one help with email	Daily
Example: Classroom training on browsing the internet	Quarterly

Are you currently working on any new technology projects or services?

Project or Service	Estimate date it will be implemented
Gaming in libraries	
Gadget box which includes-	

Internet Connection Information and Technology Inventory

Internet Service Provider	Connection Speed

Factors which effect speed of machine	Using – effects
Traffic Shaper – Limit the speed and bandwidth available to certain data streams	
Quality of Service – complements packet shaping, and it often requires a packet shaping to work effectively	
WAN Optimizer – use a variety of techniques to strip out the ineffectiveness and redundancies from network traffic. It speeds up all the traffic that passes through it.	
Web Caching or Proxy Server – a piece of software or hardware that saves copies of recently accessed pages in memory or on a hard drive in order to speed up retrieval	
Filtering – does filtering your network slow it down.	
Antivirus software – does it scan everything done on the machine?	
Internet Explorer Configuration Caching Webpages Disk space of where the pages are stored Deleting old files	
Is your computer going into Hibernation? Is your machine set to have the hard drive and monitor go into stand-by?	

Technology Inventory
from the Planning for Success Toolkit

http://techsoupforlibraries.org/files/Planning%20for%20Success%20Toolkit.pdf

You will find useful forms for your Technology Inventory in the Toolkit:

Desktop Hardware Inventory ..... page 65
Standard Hardware Inventory ..... page 66
Standard Desktop Software Configuration..... page 67
Software License Inventory ..... page 68
Server Inventory ..... page 69
Switch ..... page 92
Wireless Access Point ..... page 93
Router ..... page 94
Firewall ..... page 95
Internet Connection Hardware ..... page 96
Other Network Information ..... page 97
Web Site ..... page 98

- May want to list Video and Sound card specifications to know if they can be used with on-line gaming. For Video Gaming using Consoles create a list with serial numbers of your consoles, TV's, projectors, controllers, games, etc.