

Technology Planning

The best plan is, as the common proverb has it, to profit by the folly of others (Pliny the Elder)

Are You Experienced?

- Has your library done a strategic / long range plan in the last 5 years?
 - Did you participate?
- Have you done a technology plan before?
- Have you applied for an LSTA or other grant that requires planning?
- Have you ever applied for E-Rate funding?
- Is your library part of an automated resource sharing network?

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What Is a Technology Plan?

- “A plan of how to get your school, district or organization from where it is now to where you want it to be.”
 - (U. of Texas Collaborative Technologies Center)
- **To wit:**
 - Assess what you have
 - Identify needed/desired technology
 - Prioritize those needs
 - Do a “gap analysis”
 - Develop a strategy and justification to get there
 - Implement the Plan
 - Evaluate your success
 - Keep the plan –and underlying tools-- current

What It Is

- An approved technology plan should establish explicit connections between the proposed physical infrastructure of the information technology and **professional development strategies** that will lead to specific curriculum reforms or **library service improvements**. A carefully developed technology plan will also help to ensure that you have **secured the resources** you need to make effective use of your telecommunications services and Internet access, including: computers and peripheral equipment, staff training, software, and a budget for operating costs and maintenance. And finally, a thorough technology plan will include an **evaluation process** to help you **monitor progress** toward your **established goals**.
 - SLD website (<http://sl.universalservice.org/apply/step2.asp>)

E-Rate Requirements

- **Goals, Objectives, Strategies, and Activities** The plan establishes clear goals and a realistic strategy for using telecommunications to improve library services.
- **Professional Development Strategy** The plan has a professional development strategy to ensure that staff knows how to use the new technologies to improve library services.
- **Needs Assessment of Telecommunication Services, Hardware, Software, and Other Services** The plan includes a needs assessment of the telecommunication services, hardware, software, and other services that will be needed to improve library services.
- **Sufficient Budget (should cover a THREE YEAR PERIOD if plan is approved for 3 years)** The plan provides for a sufficient budget to acquire and maintain the hardware, software, professional development, and other services that will be needed to implement the strategy for improved library services.
- **Plan Evaluation** The plan includes an evaluation process that enables the library to monitor progress toward the specified goals and make mid-course corrections in response to new developments and opportunities as they arise.

Benefits of Technology Planning

- Meet your service goals
- Improve workflows in your library
- Impress the powers that be (e.g., your mayor or finance committee)
 - Institutional recognition
 - Defensible \$\$ associated with funding requests
 - Support “obvious” equipment needs
 - Get regular equipment replacement out of capital and into to operating budget
- Help you get outside funding
 - Including E-Rate funding
- Measure your success

Are Tech Plans Mandatory?

- E-Rate requires a technology plan for any service beyond POTS, “Plain old Telephone”.
- Required for:
 - Dedicated or advanced telecommunications (Centrex, 56K, T-1 lines, DSL)
 - Internet Service (cable, ISP)
 - Internal Connections (routers, switches)

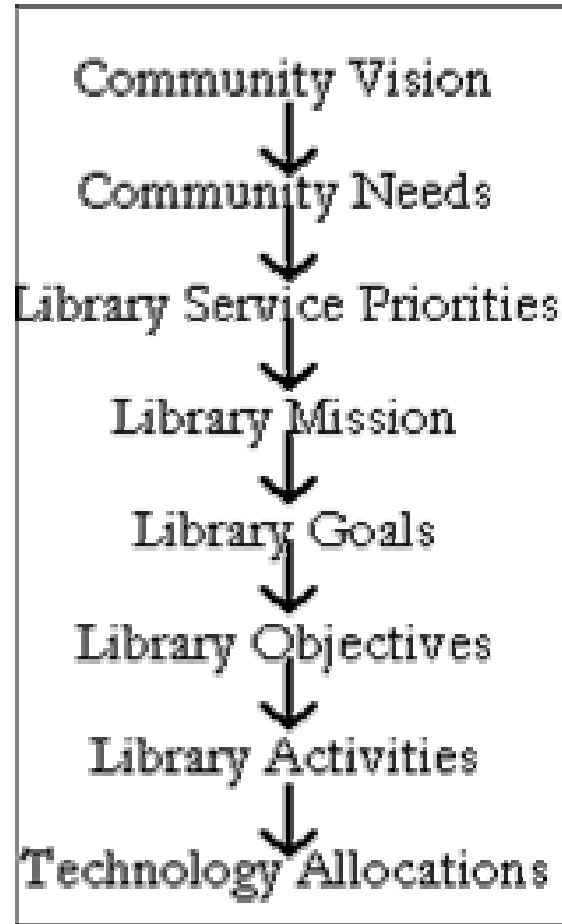
Who is Driving this Bus?

- Technology should *not* drive the technology plan.
 - Continually check yourself on this.
 - New technology can be very seductive
- Your staff technology geek should not drive the technology plan.
- Library strategic plans don't mention "computer" or "Internet" in their goals
 - Maybe not in their objectives

Important PLA Publications

- Wired for the Future, Diane Mayo and Sandra Nelson (© 1999)
 - More of a start from scratch approach
 - Detailed discussion on network infrastructure and specific technology solutions from the late '90s
 - Definitions of hardware, software, networking
 - Showing its age, but may have some worksheets that are still useful
- Technology for Results, Diane Mayo (© 2005)
 - assumes existing technology and some expertise
 - focused on service priorities / goals established using the “Planning for Results” series of books
 - Abstracted from any specific technological approaches, except for use in examples

From Technology for Results



You are here,
mostly.

Got LRP?

- If you have done a Strategic Plan or Long Range Plan (LRP)...
 - Everything is based on your vision, “service responses” or roles, goals, objectives, and activities
 - There may be a “Technology Resources” subsection provided in your strategic plan
- If not, do you have to do an LRP first?
 - No, but you need to do a real quick and dirty mini planning process.

No Service Plan?

- Identify Service Priorities
 - This involves other people. Not the same group as the tech planning committee
 - Do a quick and dirty selection of priorities
 - 3 – 5 recommended
 - Formulate goals*
 - Generate activities*
 - Develop objectives*

*Helps meet E-Rate requirements

13 Service Responses

- Basic Literacy
- Business & Career Info.
- Commons
- Community Referral
- Consumer Information
- Cultural Awareness
- Current Topics & Titles
- Formal Learning Support
- General Information
- Government Information
- Information Literacy
- Lifelong Learning
- Local History & Genealogy

- Roll Your Own

Nelson, Sandra. New Planning for Results: A Streamlined Approach. Chicago, Public Library Association, 2001.

Goals

- “The outcome your community (or a target population within your community) will receive because the library provides programs and services related to a specific service response”

Ibid.

Sample Goal

- Residents of Ersatzberg will have the ability to fully participate in the democratic process at the local, state, and national levels.
 - Or, perhaps a more specific audience, *e.g.* immigrant populations

Objectives

- “The way the library will measure its progress toward reaching a goal”.

Ibid.

- Measurement
- Timeframe

Sample Objectives

- The percentage of voter enrollment for Fauxberge will increase by 5% each year during the first two years.
- By the end of the first year, 80% of the <target population> enrolled in the civic information literacy workshops will report that they are “comfortable or “very comfortable” finding out about current legislation affecting them.
- The per capita use of library Internet workstations will rise 15% per year during each year of the plan.

Whatever Happened to “Management” Objectives?

- Sample Management Objective
 - “The library will install, configure, and deploy 52 new PCs by the end of June, 2005.”
- The New Planning for Results process seems to have done away with management goals and objectives (p.80).
 - Don’t show any outcomes, or impact your library patrons

But Wait...

There are Internal Customers too!

- Staff Intranet
 - Bulletin board, wikis, collaboration software, internal email lists, procedural documents, etc.
- Acquisitions
- Scheduling application
- Meeting Room, Museum Booking
- Fund accounting
- Basic Office, file server and Internet
- HVAC

For the Back of Your Mind

- Don't overextend
- Don't feel pressured to do the Latest and Greatest
- Pay attention to mandates/legal requirements
- Pay attention to privacy issues
- Pay attention to security issues
- Stay abreast of technology trends

Don't Overextend

- Technology plans are a good place to get overly ambitious
- Remember what your resources are and are likely to be over the life of the plan

Latest and Greatest Tech Fads

“You’ve gotta put up a blog!!” says the new technology workshop trainer.

I want a wiki!!, says your patron.

- Don’t react to public pressure without considering the library’s mission and goals.

Library Content

- That being said... If you offer Web content of any substance
 - think hard about compatibility with mobile devices.
 - Cell phone display (WAP/WML)
 - Pay attention to security
 - Pay attention to accessibility
 - Pay attention to preservation/longevity
 - For your digital assets

Security

- Security vs. Open Access
 - Train your staff
 - Develop policies
 - Undertake a risk assessment
 - Security Audit
 - Don't be an ostrich
 - Establish Controls (procedures and rules)
 - Be prepared to recover from a breach

Stay Abreast of Trends

- Part of your plan should include staff time and dollars for continuing ed, conferences, reading the literature.
- Subscribe to library technology lists, read blogs (web4lib, etc.)

Heed Regulatory Requirements

- Internet Filtering
 - CIPA
 - State / Municipal Requirements
- Patron Privacy
 - Mandated privacy policies and/or procedures

Patron Privacy

Privacy Policy

- Change over time with new technology
 - Personally identifiable information
 - » Especially of children
- USAPatriot Act
 - Privacy Audits
 - How does your technology facilitate / hinder your policy?
 - Café software, OPAC “remember what I’ve read” functionality
 - How are usage statistics aggregated?

IT Risk Assessment - Another Perspective

- What are your mission-critical services
- What is putting those services at risk
 - With specific focus on technology risk
 - Integrated Library system fails
 - Electric, HVAC system failures
 - Telecomm failures
 - LAN failures
- What strategies do you have in place to mitigate those risks
- What will you actually do to reduce risk
- Wired for the Future addresses this –sort of-- using the SWOT exercise
 - SWOT = “Strengths, Weaknesses, Opportunities, Threats

Technology for Results

- A good pragmatic plan that covers all the bases
 - Service-oriented
 - Addresses administrative functions
 - Problematic for some planning processes
 - Existing and proposed technologies
 - Prioritizing choices
 - Proposes an ongoing strategy to sustain

10 – Step Process

1. Identify Results
2. Choose Committee
3. Evaluate Existing Services
4. Identify New Services
5. Assess Current Technology Environment
6. Determine Requirements for New / Expanded Services
7. Select & Present
8. Inform
9. Implement Projects
10. Sustain Planning Process

1. Identify Results

- Create a “charge” for your committee.
 - Who is the audience
 - Trustees, town administrator, State Library Agency, grant makers
 - What is the context of the tech plan
 - What is its relationship to the overall mission, service goals of the library
 - How will it be used / what will it accomplish
 - For E-Rate
 - Capital planning
 - Management tool
 - What is driving its development?
 - Timeline (less than 6 months)

1. Identify Results (cont'd)

- First of many (16) workforms
 - “Audience and Planning Results”

Audience	Inform or (I) Participate (P)	Need to Know
Trustees	Inform	Budget ramifications Policy ramifications Services expanded or dropped
Staff	Participate	Process Overview Timeline Services under consideration, etc.

Use spreadsheets

- Most of the worksheets are in tabular format
 - Author Mayo recommends using spreadsheets
 - Consider creating an Access database
 - You will be transcribing columns from one worksheet into another, a natural relational databases structure.
 - Though not for the faint of heart

2. Committee

- Who is the Chair
 - Most technical person?
 - Director?
 - You?
 - Project Management, Communications, and some technical knowledge.
- Participation
 - Public service, technical staff, a representative library group
 - Town IT department, stakeholder rep. from community?
 - Director and committee chair select remaining representatives

3. Evaluate Existing Services

- Looking for Services, but start with hardware/software inventory.
 - What services / functions does Computer A support?
What software is being used and how?
 - That way, you won't miss something.
 - TechAtlas (see Resources slide) provides an inventory tool
- Result = List of all current services and administrative functions supported by technology
 - e.g. 5 computers support “Public Internet Access”

Public Services or Administrative Function?

- Considered and evaluated differently
 - If both a PS and AF, choose one
 - Public Service if in doubt
 - Is administrative function served critical?
- Public services
 - Link to Strategic Plan Goals
 - Next, sort services by goal priorities in Strategic Plan
- Administrative Functions
 - do NOT have links to strategic plan
 - hence a variant worksheet.
- Sustain, Expand or Phase Out
 - Make a preliminary determination

Sustain, Expand, or Phase Out Existing Services

- Both Public Service and Administrative Functions
- How to determine
 - Explicitly stated in strategic plan (usually expansion)
 - Staff observations of public, staff work backlogs
 - Data collection (e.g. sign-up logs, web server logs)
 - Reality Check – do you have measures to make these judgments?
 - If no Strategic Plan link, and not a necessary AF, why is your library doing it?
 - candidate for phasing out
 - Duplicative Administrative Functions
 - Unused hardware, software applications, superceded
 - Web-based databases vs. CD-ROMs
 - Town-wide accounting package vs. library using Quicken

4. Identify New Services

- Effectiveness and Efficiency
 - Effective -> “Do the right thing”
 - Efficient -> “Do the thing right”
- Concept from Planning for Results, and permeates the Results series

Effective New Public Services

- “Projects” are now becoming the focus
- Meet your service goals effectively
- Look at your stated objectives now
 - Does it forward your objectives?
 - e.g., increase in use of Gale databases
 - More Internet workstations, or a training lab
 - Federated searching tool or web site redesign
 - For the appropriate audience / target group?
 - Rate audience “appeal”
 - Does it help measure those objectives?
 - Café software

Efficient and/or Effective Admin Functions

- Find better ways to run your library using new technology
 - More cost-effective, less staff time, less expensive, reduce backlogs
 - Return on Investment Calculations
 - Staff hours saved vs. initial and ongoing costs
 - Reduced costs for same or better service
 - Public service improvements worth the cost

5. Assess Current Tech. Environment (Hardware & Software)

- Expand on the inventory that you began in Step 3
- Group like computers / hardware together
 - What are you already committed to upgrade
 - What have you identified to phase out
 - What needs ongoing support but no further investment
 - What is needed to sustain... to expand...
 - *e.g.*, Can the new cataloging client run on Windows 98 over a 56k dedicated line?

5. Assess Current Technology: Staff

- Find out your staff's skills
 - Yes, this is delicate, but you need a baseline
 - Have department heads facilitate this process
 - Surveys
 - TechAtlas has a staff skills assessment tool
 - Incorporate skills needed into annual performance review goals

5. Price out “sustain” costs

- This is where you figure out how much it will cost to tread water.
 - Replacement PC’s
 - Software licenses
 - Maintenance agreements / warranty extensions
- You then know how much of your budget may be eaten up even without any new services being introduced

6. Determine Requirements of New or Expanded Services

- Think in terms of discrete projects, and project management
 - You may do 3-5 projects per year, or many more
 - For each, determine
 - hardware, software, bandwidth/network needs
 - Vendor requirements and capabilities
 - Install and ongoing support
 - Staff skills required
 - Initial and ongoing maintenance costs

Align staff with project

- Once skills required have been determined
 - Figure out who has the skills
 - e.g., “Install and configure secure web server” => Paul K., reconfigure Active Directory => Rick T.

Estimate Project Time

- Five Stages in Project Lifecycle
 1. Needs Assessment
 2. Selection
 3. Implementation
 4. Maintenance
 5. Retirement
- Estimate through stage 4 in # of days for each step (e.g. ½ day for selection)

Take Deep Breath and Put It all Together – The Draft Plan

- Project Name
 - Related Goal(s)
 - Sustain, Expand, New
 - Estimated Cost
 - Days to Implement
 - Skills available on staff
 - *Easy or challenging
 - Costly or inexpensive

7. Select and Present

- Prioritize your projects using “filters”
- Draw down from **time** and **money** available
- Sustain current services first
 - Mission critical first
- What (if any) resources are left for new and expanded services?

New and Expanded Priorities

- Mandated by law
- Already Committed
- Reflect service response / goal priorities
- New and exciting services with user cachet
- “Politically advantageous”
- Administrative Services
 - Return on Investment (ROI)
 - In \$\$\$ or staff time saved (efficiency)
 - Other (little tech “cleanup projects” for IT staff sanity)

Draft Plan & Review It

- Have someone else read it
 - A techie and a non-techie
 - Look for internal consistency
- Look that you are not putting the cart before the horse.
 - Again, no letting the technology drive the service.

Mayo Plan vs. E-Rate Plan

- Intro
 - Recommended Sustain
 - Recommended Expand/New
 - Cost Summary
 - Recommended Phase-outs
-
- Timeline
Summary of projects by service goal
Good projects not included in plan
- Goals and Strategy
 - Professional Development Strategy
 - Needs Assessment of Telecommunication Services, Hardware, Software, and Other Services
 - Sufficient Budget
 - Plan Evaluation
-

Converting Mayo To E-Rate

1. Goals

- Use “Projects sorted by strategic goal”.
 - Make sure to emphasize library / educational services to be attained.

2. Professional Development

- Synthesize staff skills survey (workform 8) and technical skills needed (workform 11).
- Discuss training to be provided to bridge the gap.
- Identify training costs in budget

Converting Mayo to E-Rate (2)

3. Hardware, Software, Telecomm Assessment
 - Summarize initial inventory (workform 2), and add equipment to be purchased (workforms 9, 10)
4. Budget
 - Split e-rate eligible costs from non-discounted costs. Make sure you show indirect costs (training, electrical, staff) clearly. Indicate WHERE YOU WILL GET THE MONEY FROM.
5. Evaluation
 - Pull from summary description of each project, since the “anticipated outcome” should be given there.
 - Dredge up your earlier thinking on how your selected technologies to measure objectives / outcomes
6. Get it approved and signed by the appropriate authority.

Midcourse Correction

At thirty, man suspects himself a fool; Knows it at forty, and reforms his plan. Edward Young (1683–1765)

- Approved Plan like a contract between staff and management. Don't change lightly, says Mayo.
- How does this jibe with a plan being nimble?
 - For E-Rate, tech plan must always support requested new services

8. Inform

- Remember who you were going to inform way back in step 1?
 - Present pieces of the plan tuned to your specific audiences.
 - “Strategic” overview with budget, staff, and policy implications for trustees
 - Detailed report giving impact on workflow and training to staff
 - Inform your users
 - Brochure, newsletter

9. Implement Projects

- Project Sponsor (e.g. head of reference)
- Project Manager (e.g. IT librarian)
 - Regular communications
- Develop timeline and staff requirements
- Implement in three stages
 - Needs Analysis
 - Procurement (RFP / Quotes)
 - Installation and Testing
- Set up evaluation strategy for project now

State Blankets of Interest to Massachusetts

- ITC02 – IT Hardware Equipment Leasing
- ITC16 – IT project management
 - public schools and public libraries **only**
- ITC16a – IT Hardware & Services
 - Computers, Mobile Computing, Storage, Servers, Maintenance & Integration, Apple
- ITC09 – Telecomm Equipment
 - Cabling and Equipment, Telephone, PBX, Centrex, LAN

More State Blankets

- ITC08 – Hardware & Supplies
 - Cables, cd, dvd, hard drives motherboards network hubs routers system enhancements scanners, etc
- ITS07 – IT Services,
 - software application developers, contractors, technical specialists
- ITS14 – Packaged Software
 - ASAP

Yet More Blankets

- ITT09 - Communication Network Services
 - List of voice, data and cellular providers
- ITT13 – Internet Services and Hosting
 - Designed for E-Rate w/SLD form 470 id (current contract may end at end of upcoming year – June 06)

10. Sustain Planning Process

- Put it in a folder and never look at it again?
- Start all over in 2 ½ years?
- Mayo recommends ongoing review process
 - Various channels for new project ideas
 - Technology “suggestions” boxes (staff & public)
 - New ideas evaluated, put in queue, wait for available resources
 - Regular review of current projects
 - Including evaluation of outcomes
 - Constantly updated inventory
 - Analogy to collection development

Resources

- WebJunction (www.webjunction.org/)
- TechAtlas (techatlas.org/tools/)
- SLD (sl.universalservice.org/apply/step2.asp)
 - Also see SLD's Training & Outreach PowerPoint(s)
 - Shown on left column of SLD web site
- E-Metrics Instructional System
(www.ii.fsu.edu/emis/)
 - Charles McClure and John Bertot

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Thank You

June 21, 2005

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Mass Board of Library Commissioners