

## Chapter 12 (Technology)

Technology is ubiquitous and permeates most aspects of our lives, environments, and expectations. Libraries are challenged to cope with the integration of technology solutions for all library services as well as to plan for and assess the impact of technology based on users' expectations. Technology, however, is only a tool that is interwoven into all aspects of library services, programs, and operations. The significant keys that serve as the catalyst to unlock technology, the tool, include:

- an informed, qualified, and trained staff whose direct interaction, insight, and instruction in the provision of quality patron services are imperative;
- an adequate budget to maintain and improve all aspects of the library's technological environment and services; and,
- a long-range/strategic technology plan that embraces integration of new technologies into library services, programs, and operations.

The multifaceted roles for technology in the library environment include but are not limited to:

- communications conduit(s): telephone, fax, chat, email, social media;
- providing access to relevant digital content and enabling community members to create their own digital content (workstations, printers, use of software, Internet access, email, makerspaces);
- access to resources within and beyond the local library's resources through the library's website (e-books, audio books, real-time reference);
- expedited and enhanced patron services (automated circulation systems, self-checkout, e-commerce solutions);
- 24/7 library access (via the library's website); and
- improved staff efficiency in both serving patrons and in handling day-to-day routine library functions/operations (remote servers, Cloud, off-site servers).

### Technology Standards

1. Based on local technology planning, the library ensures adequate technological access and maintains appropriate hardware/software that effectively accommodates both library operations and patron needs.
2. The library must have:
  - a telephone, with a listing in the phone book and via Internet search engine;
  - a telephone voice mail and/or answering machine;
  - a fax and/or scanner;
  - a photocopier;
  - effective Internet access, with sufficient capacity to meet the needs of both the staff and the public;
  - library and/or departmental email accounts for patron communication with the library (email must be read and responded to during library hours.)
  - an *Americans with Disabilities Act* (ADA) compliant library website that is updated at least monthly;
  - up-to-date computers with sufficient capacity to meet needs for staff and public access;

- up-to-date printers with sufficient capacity to meet needs for staff and public access;
  - up-to-date anti-virus protection and Internet security software installed on every library computer;
  - up-to-date Internet browsers, web applications, and plug-ins;
  - a valid email address, accessible via the library’s website, for the library administrator; and
  - a website that includes basic library information such as hours, location, contact, official name of library, and content required by the *Open Meetings Act*.
3. The library provides a sufficient number of patron-accessible workstations/devices on a per capita basis. The wait time for patron-accessible workstations/devices is minimal and does not exceed 15 to 30 minutes.
  4. The library annually evaluates and, if necessary, updates its Internet connectivity options for service impact and cost-effectiveness. Illinois libraries participate in the Illinois telecommunications network/backbone, i.e., the Illinois Century Network [www.illinois.net] when such participation is economically feasible.
  5. The library provides 24/7 remote access to library services and resources through:
    - a web-accessible library catalog;
    - *Americans with Disabilities Act* (ADA) compliant library website that is updated at least monthly;
    - appropriate regional, state, national, and international bibliographic databases;
    - other authenticated electronic resources that are available for direct patron use; and
    - virtual reference service, instant or text messaging services, and/or library email account.
  6. The library staff must be:
    - computer literate;
    - trained to use and assist patrons in the use of electronic resources and materials; and,
    - accessible via phone, email, and/or through messaging services.
  7. The library provides or partners with other community agencies to offer its patrons instruction (workshops, classes) in the use of computers, email, productivity software, and the Internet.
  8. The library provides web links and access to regional and/or statewide initiatives including:
    - regional library system consortial web-based catalogs;
    - the CARLI academic library catalog (I-Share);
    - Illinois State Library-sponsored databases/e-resources;
    - other electronic collections as available; and
    - virtual reference service.
  9. As an equal partner in resource sharing, the library inputs and makes its collection holdings accessible for resource sharing within a regional, statewide, national, and/or international database.
  10. The library has a board-adopted Internet acceptable use policy that is reviewed annually.
  11. The library budgets for ongoing technology needs including but not limited to: hardware and software purchases, upgrades, ongoing maintenance, services, and connectivity.

12. The library maintains, troubleshoots, repairs, and replaces computer hardware and software. This ongoing maintenance is handled by trained library staff and/or via a contractual service agreement with an appropriate service provider.
13. The library develops and updates at regular intervals a long range/strategic plan for its future technology needs based on community needs and priorities. The plan includes the date of implementation, the planned review schedule, and addresses, at a minimum, the areas noted below as required in the School and Libraries Program of the Universal Service Fund [[www.universalservice.org/sl/applicants/step01/default.aspx](http://www.universalservice.org/sl/applicants/step01/default.aspx)]
  - goals and realistic strategy for using telecommunications and information technology;
  - a professional development strategy;
  - an assessment of telecommunications and information technology services, hardware, software, and other services needed;
  - budget resources; and
  - ongoing evaluation process.
14. The library continuously strives to improve its technological services, resources, and access. An ongoing planning cycle includes a needs assessment that examines current and emerging technologies, community feedback about library technology, and service enhancements including but not limited to:
  - wireless access (Wi-Fi);
  - Internet connectivity upgrades sufficient for patron and staff use;
  - networking (local vs. wide area);
  - library Intranet;
  - an *Americans with Disabilities Act* (ADA) compliant library website that is updated at least monthly, highlights library services and programs, includes hyperlinks, and is interactive and mobile compatible;
  - patron self-checkout functionality;
  - new technologies/potential services; for example, social networking, makerspaces, and mobile apps;
  - current and functional meeting room technology;
  - adaptive technologies that accommodate service needs for persons with disabilities and special populations, including but not limited to: accessible computer hardware, deaf interpreters, language translators, open captioning; and
  - ongoing staff continuing education/training related to all aspects of technological services.
15. The library protects the integrity, safety, and security of its technological environment via:
  - anti-virus software and other Internet security software;
  - Firewalls with advanced threat protection;
  - authentication;
  - routine installation of upgrades, patches, etc.;
  - scheduled data backup; and
  - remote/off-site storage of data backups with a plan for redundancy in case of backup failure.

16. The library's automated catalog and its components comply with current state, national, and international standards including, for example, but not limited to:
- Illinois statewide cataloging standards [<http://www.cyberdriveillinois.com/departments/library/grants/cmc.html>]
  - MARC 21 (Machine Readable Cataloging) formats [[www.dublincore.org/](http://www.dublincore.org/)]
  - ANSI (American National Standards Institute);
  - NISO (National Information Standards Organization);
  - ISO (International Organization for Standardization); and
  - Specific standards including ANSI/NISO Z39.50 protocol, the Bath Profile, and ISO 16160, 10161.
17. The library is aware of E-rate discounts (telecommunications/connectivity services and/or Internet access) as available through the Schools and Libraries Program of the Universal Service Fund, administered by the Universal Service Administrative Company (USAC) under the direction of the Federal Communications Commission (FCC) and applies as determined by the local library board [[www.usac.org/sl](http://www.usac.org/sl)].

## Technology Checklist

- Based on local technology planning, the library ensures adequate technological access and maintains appropriate hardware/software that effectively accommodates both library operations and patron needs.
- The library has:
  - a telephone, with a listing in the phone book;
  - a telephone voice mail and/or answering machine;
  - a fax and/or scanner;
  - a photocopier;
  - effective Internet access with sufficient capacity to meet the needs of both the staff and the public;
  - library and/or departmental email accounts for patron communication with the library (the library email account is reviewed and responded to during library hours);
  - an *Americans with Disabilities Act* (ADA) compliant library website that is updated at least monthly;
  - up-to-date computers for staff and public access with sufficient capacity to meet needs;
  - up-to-date printers for staff and public access with sufficient capacity to meet needs;
  - up-to-date antivirus and Internet security software protection installed on every library computer;
  - up-to-date Internet browsers, web applications, and plug-ins;
  - a valid email address, accessible via the library's website, for the library administrator; and
  - a website that includes basic library information such as hours, location, contact, official name of library, and content required by the *Open Meetings Act*.

- The library provides a sufficient number of patron-accessible workstations/devices on a per capita basis.
- The wait time for patron workstations does not exceed 15 to 30 minutes.
- The library annually evaluates and, if necessary, updates its Internet connectivity options for service impact and cost-effectiveness.
- The library provides 24/7 remote access to library services and resources through:
  - a web-accessible library catalog;
  - an Americans with Disabilities Act (ADA) compliant library website that is updated at least monthly;
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  - virtual reference service, and/or text messaging services, and/or a library email account.
- The library staff must be:
  - computer literate;
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- The library provides or partners with other community agencies to offer its patrons instruction (workshops, classes) in the use of computers, email, productivity software, and the Internet.
- The library provides web links and access to regional and/or statewide initiatives including:
  - regional library system consortial web-based catalogs;
  - the CARLI academic library catalog (I-Share);
  - Illinois State Library-sponsored databases/e-resources;
  - other electronic collections as available; and
  - virtual reference service.
- As an equal partner in resource sharing, the library inputs and makes its collection holdings accessible for resource sharing within a regional, statewide, national, and/or international database.
- The library has a board-adopted Internet acceptable use policy.
- The Internet acceptable use policy is reviewed annually.
- The library budgets for ongoing technology needs including but not limited to: hardware and software purchases, upgrades, ongoing maintenance, services, and connectivity.
- The library maintains, troubleshoots, repairs, and replaces computer hardware and software. This ongoing maintenance is handled by trained library staff and/or via a contractual service agreement with an appropriate service provider.

- The library develops and updates, at regular intervals, a long-range/strategic plan for its future technology needs. The plan is based on community needs and priorities.
- The library continuously strives to improve its technological services, resources, and access. An ongoing planning cycle includes a needs assessment that examines current and emerging technologies and service enhancements including but not limited to:
  - wireless access (Wi-Fi);
  - Internet connectivity upgrades sufficient for patron and staff use;
  - networking (local area vs. wide area);
  - library Intranet;
  - an *Americans with Disabilities Act* (ADA) compliant library website that is updated at least monthly, highlights library services and programs, includes hyperlinks, is mobile compatible, and is interactive;
  - patron self-checkout functionality;
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  - ongoing staff continuing education/training related to all aspects of technological services.
- The library protects the integrity, safety, and security of its technological environment.
- The library's automated catalog and its components comply with current state, national, and international standards.
- The library is aware of E-rate discounts (telecommunications/connectivity services and/or Internet access) as available through the Schools and Libraries Program of the Universal Service Fund, administered by the Universal Service Administrative Company (USAC) under the direction of the Federal Communications Commission (FCC).