



Queensland Public Library Standards and Guidelines

Technology Standard
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11. Technology Standard

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11.1 Objective

To provide minimum standards for the effective use of information and communication technology in Queensland public libraries. Guidelines provide further information to assist in the planning of services at the local level.

11.2 Technology Standard

11.2.1 Standard for Public Internet access

The library service should provide free and equitable public access to the internet for library clients in each library site. Internet access should be facilitated by the fastest broadband speed available to the local government, preferably similar to speeds available in metropolitan areas.

Booking systems for PCs should be implemented where necessary. Due consideration should be given to any council policies covering email usage.

In the interests of promoting public access to the widest variety of information, the library should avoid censorship of online content, except where council policies, local laws or other legislation specifically prescribe it. The Australian Library and Information Association's (ALIA's) Statement on Online Content Regulation (<http://www.alia.org.au/policies/content.regulation.html>) recommends that "libraries and information services support the right of all users to unhindered access to information of their choice regardless of format" and that "access to electronic information resources should not be restricted except as required by law". If a decision is made to utilise internet filters, they should not limit the comprehensiveness of internet searching for reasonable research and communication purposes.

For further information on the regulation of online content, see 11.5.2.

11.2.2 Standard for Library Automation

All library sites open for 6 or more hours per week should have an automated Library Management System (LMS) with online circulation transactions. Backup, validation and recovery processes should be in place and regularly tested and verified, with backups performed daily to protect data in the event of hardware and software failures.

Each library should also have procedures in place to cope with the failure of equipment or power outages.

11.2.3 Standard for Personal Computers (PCs)

All PCs and their placement within the library should meet occupational health and safety standards as well as relevant workplace standards.

The following standards for numbers of PCs are recommended minimum standards for all libraries. In determining the required number for each library service, several other factors should be considered, including numbers of staff, opening hours, peak borrowing periods, borrowing habits, and the extent to which circulation PCs are used for other functions like cash payments and bookings.

Populations listed refer to the total population of the local government, and distribution of PCs across branches should be determined by local population catchments and relative demand.

Number of PCs for staff use	
Management, administrative and technical services staff	One PC per full-time equivalent staff
Other library staff	Staff in all library sites should have access to PCs in the work area.
Number of Circulation PCs (including any self-check machines)	
Minimum of one PC per branch. Where total annual transactions exceed 200,000, add one PC for every additional 200,000 or part thereof. Add one PC if reader's advisory or reference service is provided from the loans desk.	
Number of PCs for public use: multifunctional	
One PC per 2,500 population or part thereof. At least 75% of the PCs in each branch should provide access to the internet.	

11.2.4 Standard for Information and Communication Technology (ICT) Governance

11.2.4.1 ICT Plans

Each library service should have ICT Plans or similar documents, which may form a component of Council's ICT Plan. The plans should detail the library service's strategy for provision of an effective and efficient use of technology.

The plans may address issues such as:

- overview of existing business systems, network and communications infrastructure
- support arrangements including details of maintenance contracts and service level agreements for ICT support
- upgrading of Library Management System (LMS) and web browsers
- timeframe and format for evaluation of LMS suitability
- life cycling of equipment and upgrades of hardware and software, including browsers and helper applications
- change management processes
- disaster recovery and business continuity strategies including contingency for the operation of manual circulation
- strategic direction and proposed future services

The plans should be reviewed regularly to ensure relevancy and be used to assist with budget development.

11.2.4.2 ICT policies

The library service should have user policies and guidelines, which clearly detail issues such as PC usage, training offered, charges, and client usage responsibilities, e.g. "Acceptable Use Policy" and "Internet Use Policy". Policies should be developed as required to address emerging IT issues such as social media and their application within the library. The policy documents should be reviewed regularly and take into account feedback from clients, council policies, Library Board of Queensland policy documents and the services provided by other Queensland public libraries.

11.2.5 Standard for web based services

The library service should have a web site or a significant presence on the council web site to offer information to clients, and to provide access to online services and digital resources. Where the library web pages are a part of the council website, they should be prominent and easily accessible from the homepage. Where possible, library web sites should adopt the World Wide Web Consortium's Web Content Accessibility Guidelines (<http://www.w3.org/TR/WCAG20/>) to help ensure accessibility for everyone including people with a disability or low literacy levels.

The library service should either offer a web based catalogue or be working towards the implementation of such a service, with strategies included in council planning.

The web browser/s used by the library should be kept current with the installation of new versions as specified in the library's ICT plans.

11.2.6 Standard for staffing

Where overall staff numbers allow, the management of ICT in a library service should be a specifically allocated duty. Designated staff members should be adequately trained on the LMS, world wide web and other technologies underpinning library services. Responsibilities should include liaising with library staff, suppliers and technology units in council, and keeping abreast of emerging technologies.

Library services with a population of 50,000 or more should consider the creation of an Information Technology/Systems Officer/Librarian position. This position would be responsible for library ICT planning, ensuring the effective implementation of ICT and coordinating with council staff and suppliers to support the management of the library ICT environment. This position would also be responsible for ensuring staff awareness of and exposure to relevant technological developments.

11.3 Guidelines

11.3.1 Guidelines for web based services

Provision of a web based catalogue is highly recommended, as it allows clients to search holdings of the local library and external libraries and to conduct a wide range of transactions such as reservations and payments remotely and at any time, offering greater convenience and independence. It extends the library's services beyond the limits of the building and the restrictions of opening hours.

Web 2.0 and interactive technologies are increasingly becoming standard communication tools for the provision of library services. Access to and familiarity with these enabling technologies is strongly encouraged, both as a service to clients and as a means of promoting libraries.

When new services or programs are introduced in the library, consideration should be given to the use of online technologies to extend or enhance these services e.g. online book clubs.

11.3.2 Guidelines for Library Management Systems

The Library Management System (LMS) should be kept up to date with the installation of new releases as specified in the Library's ICT Plans. A timeframe should be established for the undertaking of an evaluation of the effectiveness of the LMS and its capacity to meet the library's changing needs. The timeframe should also take into account any council policies regarding life-cycle of software.

For library services operating from multiple sites, including mobile libraries, the LMS should have the ability to share bibliographic and circulation information. Where real time connectivity is not available for mobile libraries, regular scheduled exchanges of data are essential.

The utilisation of optional email, telephone and/or SMS facilities for advising clients of reservations, overdue notices and other messages is strongly recommended. Where possible, consideration should also be given to availability of the library catalogue in a format suitable for mobile devices.

11.3.3 Guidelines for PCs for staff use

Access to the LMS and the full suite of relevant applications should be facilitated within the council's ICT infrastructure. Appropriate back-up facilities are required, as is ease of communication between all library sites and council staff.

All library staff should have access to tools and software applications relevant to their duties, including internet, office and specialist software and appropriate printing facilities. This access may require a different level of security from that required for general council business, reflecting the role played by library staff in the provision of online information (see also 11.2.1).

Reference/information desks should include a PC with access to the LMS, internet, and relevant software.

When determining PC numbers, the impact of outsourcing technical services (acquisitions and cataloguing) should be taken into account where relevant, in addition to referring to the standard (11.2.3).

The networking of PCs enables multiple usage of software and peripherals such as printers and modems. The decision to network should be based on a cost benefit analysis which considers issues such as the number of PCs to be connected, increased use of peripherals, increased software licence costs, impact on work practices etc.

11.3.4 Guidelines for Circulation PCs

The number of circulation PCs should reflect the council's performance measure for acceptable queuing times. e.g. 80% of circulation transactions completed in less than 2 minutes, and system response times being less than two seconds per transaction for 90% of the time.

In multi-site library services, the distribution of PCs between sites should be in proportion to the catchment population and the transactions performed at each site. Local building design and workflow also need to be considered, e.g. the existence of separate returns areas, proximity to return chutes.

All circulation PCs should have the ability to read item and client details, interfacing with the LMS. Standard printing and slip printing facilities should be considered for the circulation area.

Consideration should be given to the use of technologies that enable client self-service such as checkout, as well as automated sorting which increases efficiencies for discharging loans and stocktaking. Where utilised, self-checkouts should be introduced as part of an integrated circulation service delivery strategy. These technologies can assist in providing reduced queuing times, increased user choice and improved flexibility in staffing. Issues to address before the installation of these facilities include cost-benefit analysis, customer traffic patterns, and the design, location and layout requirements of the self-checkouts.

Should failure of equipment or power outages occur, contingencies should be in place to record transactions. These may include portable barcode readers, offline circulation modules or manual recordings.

11.3.5 Guidelines for public access PCs

11.3.5.1 Distribution and set-up

Public access PCs should have clear signage and instructions at each unit. Where layout allows, they should be distributed throughout each library site. When determining the placement of computers, issues such as proximity to staff, security, wiring and possible distraction to clients using other library facilities should be considered. Ideally, adjustable tables and chairs should be provided for computers to improve ergonomics and client comfort.

When determining PC numbers, high visitor or transient usage should be taken into account in addition to referring to the standard (11.2.3).

Public access PCs should offer a suitable range of software applications such as word processing, spreadsheets and content access software. Usage of software applications should be regularly reviewed to ensure continued public interest. Versions should be kept up to date and new applications added according to demand.

The provision of adequate and up-to-date protection from malicious software and code is essential, as is the blocking of public access to system files. The separation of public and staff networks may further assist with online security.

Public access PCs should have access to a printer and should provide flexible options to clients for saving and/or transfer of data.

Where appropriate, capacity to download and use mobile technologies such as Bluetooth, MP3 and MP4 should also be considered.

Consideration should also be given to the utilisation of wireless technology in the library, allowing clients to use their own laptop computers or other mobile devices. This option offers the benefits of increased online access and client satisfaction in the library without increasing the number of library PCs. The introduction of wireless technology will require an assessment of the number

and placement of power points throughout the library and the development of policies regarding any requirements for the connection of personal devices.

The provision of dedicated PCs with suitable hardware and software for use by clients with special needs is strongly encouraged. The features of such PCs may include large monitors, large keyboards and trackballs, and software which increases font size. Multilingual software and fonts are also available for clients wishing to access non-English language material. For more information, see <http://www.slq.qld.gov.au/info/lang>.

Libraries should be mindful of their responsibilities regarding the retention and or/disclosure of personal information on clients (such as web search histories), and these should be clearly outlined in a Personal Information Policy or similar document. This policy should be consistent with any council privacy policies and relevant legislation.

11.3.5.2 Public Access Catalogues (PACs)

Dedicated PACs allow clients quick access to the library collection, and should be considered where public use PCs are in high demand and continuously booked. Where possible, PACs should have access to printers.

Multifunctional PCs/PACs can provide greater flexibility, as access can be extended or altered to include other PC resources. For example, a PC could be extended to provide access to PACs from other library services, or to follow links to catalogued digital resources.

11.3.6 Guidelines for training

The effective use of ICT in libraries is dependent on the provision of training in its use. A training plan for both staff and clients should be in place in each library service, and should be developed in response to staff and client requirements. Training needs and training delivery methods used should be reviewed on a regular basis.

11.3.6.1 Training - Staff

Staff training in ICT resources, including the LMS and any hardware or software introduced into the library, is essential. Staff should be familiar with software available to the public, in order to provide effective assistance. Formal training can be provided via workshops, online tutorials and access to training resources. Staff time including travel time for training in regional centres should be made available for this purpose.

On the job training and refresher sessions should also be available as required and should be delivered by suitably experienced staff.

11.3.6.2 Training - Public

Each library service should offer free basic training programs in accessing the information resources provided at the library. In particular, regular internet training sessions should be provided. These programs should be supplemented by access to other relevant resources such as books, videos, online tutorials, and CD-ROMs/DVDs.

While library staff should provide assistance to clients in the use of ICT resources, they are not qualified IT support staff and they cannot be expected to provide expert advice and training on all resources available in a public library. The extent of staff assistance should be clearly outlined in any documentation provided to clients. Where necessary, staff should refer clients to other training providers.

11.4 Performance Indicators

- Provision of internet access free of charge for library clients
- Facilitation of internet access at the fastest available broadband speed, similar to those in metropolitan areas
- Access to technology in all sites, as per recommended standards for internet access and PCs
- Provision of automated Library Management System
- Currency of LMS version, and associated hardware and software
- Training in LMS, internet and relevant software is provided regularly to staff
- Provision of wireless technology for clients
- ICT Plans and policies are current, available and followed closely
- Provision of web based library services and resources, including library web site which is updated regularly

11.5 Definitions and References

11.5.1 Definitions

Bluetooth: a wireless technology that enables data connections between electronic devices such as PCs and mobile phones.

Broadband: a high-speed Internet connection using DSL (Digital Subscriber Line), cable, wireless, fibre optic or satellite, through a high-speed network connection.

ICT (Information and Communication Technology): any computer-based resources (networked or stand alone), hardware or software tools used for business functions and processes.

LMS (Library Management System): a library's automated management system that would typically include functions or modules such as circulation, acquisitions, cataloguing, public enquiry, stock control and reporting.

MP3: a compressed music and audio format popular for digitising music.

MP4: a compressed multimedia container which holds a mix of formats such as video, images and animation.

Malicious software: any software or code that is designed to infiltrate and harm or modify a computer system without the owner's authorisation or knowledge. Examples include viruses, trojans, worms and spyware.

PAC (Public Access Catalogue): a computerised library catalogue which can be searched online, and is sometimes referred to as an online catalogue. It is used to access the holdings of a library as well as those of a wide range of other libraries.

Portable Storage Devices: devices which permit a library customer to access, edit and save personal files on library equipment. Examples include portable external hard drives, USB storage devices, floppy disks, CD-RW.

RFID (Radio Frequency Identification): the technology that uses devices attached to library items that transmit circulation transactions for member self-service.

Web 2.0 and interactive technologies: web applications that facilitate information sharing and collaboration among users. Examples include hosted services, social networking sites, wikis, blogs, mashups and folksonomies. These applications can offer interactive library services to clients, encouraging their feedback and participation.

11.5.2 References

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