Newport Public Library
Newport, Oregon

TECHNOLOGY REVIEW

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FINAL

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Table of Contents

Executive Summary

This report is part of a multifaceted project commissioned by the Newport Public Library commencing in January 2014. The project encompassed strategic planning, a technology review, and a facility improvement assessment. The technology review, conducted by Lucien Kress in collaboration with Ruth Metz Associates, included two site visits, interviews with stakeholders, input from the strategic planning and facility improvement assessment, and review of documentation provided by the library. The review includes recommendations for short and medium term improvements to technology infrastructure and services.

Newport Public Library has a strong technology foundation to build on. Our recommendations focus on increasing automation and self-service, adapting the public computing environment in keeping with trends toward smaller and more portable devices, and empowering staff to provide services in an ever-changing technological environment.

Technology Review and Recommendations

IT Resources and Support Structure

Newport Public Library receives Information Technology services from the Newport City IT Department. The Library experiences both the benefits and costs of shared IT services: economy and a high level of predictability and quality on the one hand; difficulty supporting non-standard technologies and occasionally having to wait for lower priority items on the other. City IT is very competent and brings certain efficiencies that are ahead of the curve, such as virtualized servers and public computers with built-in image refreshing capabilities. Library staff are generally satisfied with IT response time. The greatest concern is that there is little IT staff depth -- a grand total of two IT staff providing 1.6 FTE.

As part of a consortium, the Library's integrated library system (ILS) is hosted by the vendor, Innovative Interfaces, Inc., and administered by consortium staff in Tillamook. The Library is also a member of the Oregon Digital Library Consortium, providing access to the Library2Go ebook and audiobook collection.

- The Library should advocate for greater depth in City IT.
- The Library should develop third-party resources that can provide some IT support in the event that City IT is unavailable.

Several staff members have administrative privileges to install software, and most staff are fairly comfortable with technology and bring specialized skills of their own.

- Create a set of technology competencies for staff.
- Use Library Edge assessment to set baseline and identify weaknesses.
- Create and implement a staff training plan.
- Create a "technology tub" program to expose staff to new devices and apps as they become available.

Technology Infrastructure

The technology infrastructure is quite good. The Library has a fiber optic connection to the City and its servers, which are sited in the City's well-provisioned data facility and provide a virtualized environment for library services. The Library has 1Gb of dedicated Internet bandwidth through Coastcom. Staff and public networks are segmented and Internet traffic is managed separately. The network is well-provisioned and underutilized. WiFi access points have been improved recently and can now provide better coverage and statistics.

- Pay attention to the number of IP addresses available to patrons using their own devices.
- The Library should request wifi connection statistics so they can track critical usage data.

The VoIP (voice-over-IP) infrastructure provides cost savings over traditional telephone infrastructure and a platform for providing video-based services. The Library should consider leveraging the platform with services such as video-chat reference and video-based communications with other libraries in the Consortium.

Automation and Self Service

The Library's one self-checkout station is underused and often malfunctions. It appears that the touchscreen needs recalibration and replacement, and the barcode scanner needs to have its "beep" turned off. In addition, it is not positioned or marketed effectively. Fixing the current self-checkout station, and adding another on the main floor, would improve staff efficiency, provide options to patrons who prefer privacy, and provide a platform for additional services (fines payment, reader's advisory, etc.) A third checkout station on the lower floor would add convenience for families with young children, and appeal to children's desire to "do it myself".

- Align the self-checkout strategy with staff commitment to customer service.
- Improve positioning, presentation, and marketing to ensure every patron who wishes to use it is empowered to use it.
- Add two additional checkout stations.
- Investigate ways to make self-pickup of holds/reserves viable, in keeping with staff commitment to privacy, so that patrons do not need to visit two service points if they don't want to.

The Library needs PC reservation software. It owns licenses to Envisionware but the software has not been installed. The Library needs to make the business case for using reservation software to save staff time, reduce the likelihood of patron conflict over computer use, and -- perhaps most importantly -- provide statistics that would inform future decisions about public computers.

- Build the business case for installing Envisionware for PC reservations.

Public Computing Resources

Providing public access to computers has been a primary library service for many years. In many communities, the library is the only place citizens can gain free access to the Internet. We generally recommend between 0.7 and 1.2 public Internet computers per 1000 residents, and a similar number of specialized computers including catalog stations, word processing stations, children's game stations, etc. In addition, we recommend 10 to 20 training stations, depending on space constraints and community need. In libraries serving populations with limited access to affordable cable or DSL internet access, the number of Internet stations should be larger.

While we generally think of a desktop computer when we talk about public computers, we are already seeing a transition from desktops to laptops, and from laptops to tablet computers. Portable devices allow libraries greater flexibility in deciding how to deploy public computers throughout the library. Unlike desktop computers, laptops can be easily redeployed for training, homework support, or general web-browsing. Tablets such as the Apple iPad have special attraction for seniors, teens, and children, and can be used for web-browsing, playing games, and reading ebooks.

Staff believe -- but don't have statistics to prove -- that public computer use is declining while WiFi use increases. The current distribution of public computers on two floors, and the lack of PC reservation software, make it difficult to evaluate use. The Library should collect data to support or contradict this belief, and use the results to support an opportunity to rethink how patrons connect to technology and the Internet. Can some desktop computers be replaced with laptops and tablets that can move around inside the library? Would tethered iPads in the teen and children's areas be better used than the current desktop computers?

The Library currently has limited technology resources for teens. As the teen area is reorganized and better defined, consider adding resources such as a laptop counter with tethered iPads and space for personal devices, and a wall-mounted monitor for use with gaming consoles and media players.

The Library's three children's game stations are well-designed. Supplementing with tethered iPads would appeal to a wider age range and provide access to apps not available on Windows computers.

- Add iPads and a large-screen monitor for use with gaming consoles and media players.

The Library does not have an adaptive station for blind and low-vision patrons. The text-to-speech and magnification software on the current public computers meet some needs but do not fulfill ADA requirements. This could prove a liability.

Our initial recommendation for Newport is 42 public computers, including all categories listed above. Distribution among the "types" of public computers should be fluid and responsive to changing needs. For example, there might be 12 adult/teen desktop computers, three children's game computers, six catalog stations, six iPad tablets distributed among adults, teens, and children, three specialized workstations (adaptive text-to-speech and magnification, digitization, and creative suite), and twelve training laptops.

- Use PC reservation software to manage computers, and continually reevaluate the need for desktop computers, laptops, and tablets.
- Increase the number of public computers to 42, including a mix of Internet stations, training laptops, iPads, an adaptive station and other specialized stations.

As libraries reduce the number of desktop computers in favor of laptops and tablets, and as patrons increasingly bring their own computing devices with them, libraries will need to provide laptop-friendly seating and plenty of access to electrical outlets. In addition to comfortable chairs where laptops can be used “in the lap”, the Library might provide airport-style laptop counters with easy access to electrical outlets.

- Extend power outlets to seating areas wherever possible.

Radio Frequency Identification (RFID)

The media collection (DVDs and CDs) is a special pain point. High loss rates led to cumbersome and bulky protective cases. Implementing radio frequency identification (RFID) technology for just this collection might be economical and save a great deal of space in media shelving. Alternatives include a media kiosk (a la Redbox).

In general, RFID would provide better security and speedier checkout and check-in. Be aware that RFID is not a foolproof mechanism for theft detection and prevention; it is easily defeated by the savvy thief. But it does create a real theft deterrent, and provides a platform for other innovations like portable inventory, mobile check-out, and possibly a small automated sorting system for check-ins.

- Evaluate the cost/benefit ratio of adding RFID to the media collection or the whole collection.
- If RFID is implemented, evaluate additional technologies to leverage the investment. Would a small sorting system make sense?

Online Services

The City is currently planning to select a new web content management system. As the Library contributes requirements to that procurement effort, it should make the case for responsive web design that results in a website that is equally effective on desktop computers, tablets, and smartphones. As patrons increasingly rely primarily or solely on smartphones for accessing the Internet, the Library’s website must become more mobile-friendly, emphasizing the critical information patrons seek most often (hours, event listings, etc.) and enabling patrons to search for materials, check availability, and easily place holds.

Integration of social media such as Facebook and Twitter continues to be an important way to extend Library communications to a wider audience.

- Embrace a “mobile first” strategy for new and enhanced services.

The econtent market, encompassing ebooks, downloadable audiobooks, and streaming and downloadable video and music, is in a period of rapid change. New content aggregators such as 3M Cloud Library and Baker & Taylor's Access 360 have emerged to compete with OverDrive. Freegal and Hoopla provide new options for circulating video and audio content. While current fragmentation in the market and disparate licensing models make it difficult to commit to a long-term strategy, libraries need to stay engaged with econtent and build capacity to market, circulate, and support econtent on patron devices.

Technology Costs

The following costs are estimated and can vary significantly between vendors and purchasing contracts. Only new equipment is included. "Initial cost" represents the first-year cost for equipment purchase, software licensing, and installation. "Ongoing cost" is the annual cost for maintenance and/or replacement.

Technology (additional to current)	**Initial Cost**	**Ongoing Cost**
RFID Software and Equipment	$16,000	$1,600
RFID Collection Tagging	$24,000	$3,000
Security gates, 2 aisle with people counter and management software	$14,000	$1,400
Media dispenser	$10,000	$1,000
Wall-mount display (lobby kiosk)	$1,600	$400
Laptop charging/storage cart, 20-unit	$1,200	$200
Self Checkout stations, 2 ea.(in addition to current station)	$12,000	$1,200
Laptops, 12 ea.	$7,200	$2,400
iPads, 6 ea.	$4,800	$1,600
Wii plus large-screen display (teen area)	$1,800	$450
DVD player	$100	$30
Technology Tub (tablets, ereaders, etc. for staff familiarization)	$1,200	$600
Total:	**$93,900**	**$13,880**