PALO ALTO CITY LIBRARY

June 27, 2019

TO: Library Advisory Commission

FROM: Diane Lai, Division Head, Information Technology & Collections

RE: **Funding for Technology Equipment and Applications in the Library**

Rapid technological change is transforming what it means to be literate in the 21st Century. The surveys and studies conducted in the Library have clearly shown:

1. Our community looks to the Library to help prepare for an increasingly digital world;
2. Technology access and workshops are both identified as important.

Reliable funding is required to have the ability to provide access and workshops. While the City's general fund has been enabling the Library to provide basic services such as providing public computers and technology-focused staff to work on eResources (eBranch activities) and programming, the Library has mostly relied on grants to fund more innovative services such as the introduction of robots and virtual reality programming. This recommendation advocates for increasing the budget allocation from the City's general fund to ensure the Library's ability to consistently and continuously make progress in order to better meet customer demand.

Discussion

A detailed elaboration includes the following four aspects: the community demand, the existing services and programs, the challenges for meeting the community demand, and the expected results the recommendation generates.

1. Scope of Technology Services the Public Wants

In 2018 and 2019, the Library conducted a technology survey. It also participated in the Edge assessment, a study provided by Urban Library Council that used national benchmarks for public libraries to analyze technology demand and to identify technology gaps in respective libraries. In addition, staff have been analyzing data gathered from technology programs provided in the Library.

The key takeaways are:

- Customers want more technology access and programing
- There are gaps in this area of service in the Library.

Appendix A provides highlights from these studies.

2. **Scope of Technology Services and Programs Available**

Ongoing Technology Services

- Public PCs
- Chromebooks
- Loaner Laptops
- Printing & Scanning
- eHelp
- Tech Tutoring
- 3D Printing
- Creative Tools Station
- Sunday Robot Show

Occasional Technology Services

- Robo Dojo
- 3D Design Coaching
- Virtual Reality Programs
- Online Privacy and Security
- Technology Exhibits
- Sensory Storytime with Technology

Appendix B provides detailed information about the services and programs and how the Library supports them.

3. Challenges the Library Faces in Meeting Demand

Throughout the processes of providing these services and programs, staff have learned the following about technology services:

- The Library needs dedicated staffing for technology programs.
- The Library needs investment in research and development.
- The Library needs space dedicated for technology programs.

- The Library needs to offer technologies compatible with devices used by customers.
- The Library needs increased number of equipment and devices used for programs

Appendix C provides three case studies that illustrate how staff learned about challenges.

4. Expected Results from the Recommendation

With current staffing of 62 FTE, a dedicated budget to support technology services would provide funding for purchasing software and hardware to meet some challenges:

- Privacy screens and workstation pods
- Variety of devices available for checkout
- More access to professional creative software (e.g. Adobe CC)
- Lynda.com access, or alternative
- Up-to-date versions of equipment

However, to truly meet demand, the Library acknowledges that staff and space remain challenges. The Library is discussing solutions to these challenges separately. When the Library obtains dedicated funding and resolves these other structural challenges, we would expect to be able to:

- Turn occasional services into ongoing services (e.g. eResource workshops, digital literacy programs)
- Hold more occasional services (e.g. Robo Dojo, VR Hackfest)
- Hold technology lectures and discussions
- Outreach more extensively to external partners
- Offer more coding workshops

Recommendation

Library Advisory Commission advocates to the City Council to increase funds for strengthening library technology services and programs at the level of quality and quantity expected by the community.

Appendix A

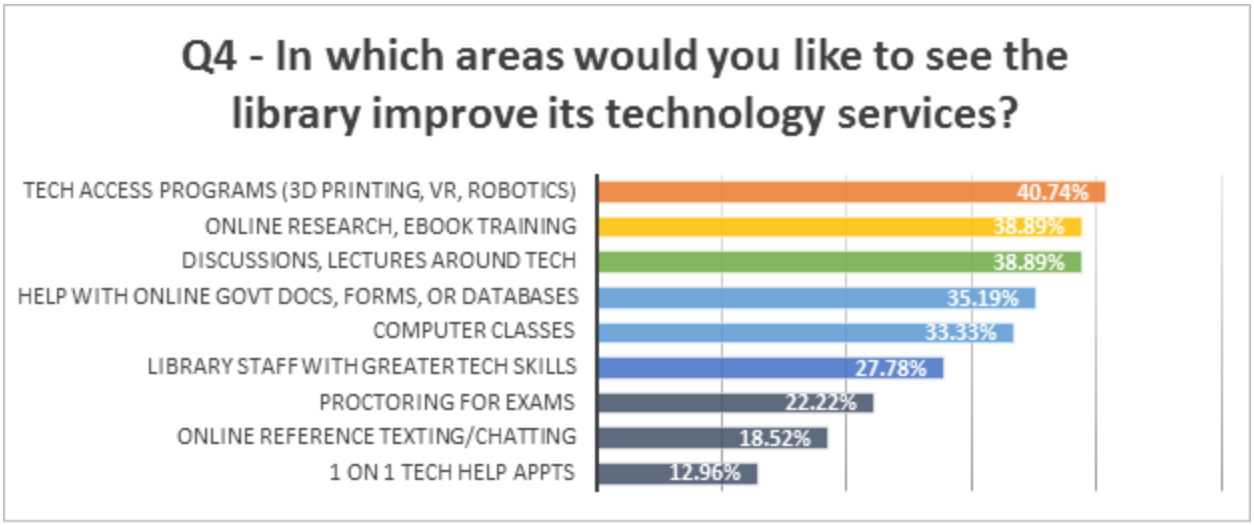
The Library has conducted surveys, analyzed technology demand from programs, and used benchmarking instruments to learn more about customer needs and identify technology gaps.

2018 Tech Survey

The library asked its customers for their opinions on current and future technology services in a Fall 2018 Tech Survey.

In the survey, the public identified four areas they considered important for the library to invest in:

- Access to new or expensive technology the public does not have at home
- eBook and Database training
- Tech discussions and lectures
- Digital creation software/hardware



EDGE Benchmarks

With support from the Bill & Melinda Gates Foundation, the Urban Libraries Council worked with libraries and local governments in developing Edge, a tool that guides libraries to set measurable, strategic goals for digital inclusion and to engage government and local leaders in meaningful conversations about 21st-century public technology needs. Edge helps public libraries establish a baseline for continuous improvement and greater community impact. More detailed information about Edge may be found at https://www.urbanlibraries.org/initiatives/edge.

The Library used this management tool to identify technology service gaps for the first time in 2014. The overall score was 515. In 2018, the Library achieved a score of 870. While progress was made, the Library has fallen short in some areas. Among our current service gaps, the Library's Technology Committee identified the following as services to be of high importance:

- The library has curricula for and provides regularly scheduled digital literacy training.
- The library supports use of public technology for patrons pursuing educational opportunities.
- Library staff assigned to assist patrons are responsible for maintaining technology competencies.
- Staff assigned to assist patrons are able to answer patrons' technology questions,
- The library provides peripheral equipment [e.g. for privacy] that enables patrons to complete tasks.

Most of these gaps ranked as highly important require staff skills and capacity rather than insufficient technology.

Demand Analysis of Technology Programs

Staff analysis of technology program attendance shows customers have high demand for technology programs:

- 3D printing reservations are booked as soon as they are posted.
- Robo Dojo is always filled, drawing over 40 attendees each time. In Spring 2019 Robo Dojo, 47 attended with 11 waitlisted.
- Sunday Robot Storytimes attract upwards of 50 attendees, with many follow-up inquiries.
- Summer 2019 VR Hackfest filled its 30 seats within a week with 23 waitlisted.

Appendix B

Ongoing Technology Services

Service	Regular Staffing	Volunteer Staffing	Description	Status and Required Resources	Funding Source
Sunday Robot Storytime	1		Storytime and activities for children with the Library robot	• 1 robot • Raspberry Pi	Library Foundation
3D Printing	1	0	Self-paced 3D printing services	• Available at DO, RI libraries only, no MP access due to ventilation issues (LEED certification) • Small objects only due to demand on filament • One 2 hour slot, 3 days per week	Library Foundation, Grant and General Fund
Creative Tools Station	1	0	Self-paced access/learning of advanced design software (Adobe, 3D design, etc.)	• Available at DO • Not available for checkout • Service can be disrupted when room is booked for other purposes	General Fund

				• No integrated learning resources (e.g. Lynda.com)	
Public PCs	*	0	Non-reservable desktop computers with standard office and Internet software	• Windows only • File-saving restricted to removable USB storage • No professional-level creative software • 3-hour limit	General Fund
Chromebooks	*	0	Non-reservable, Chrome-OS laptops for checkout	• Web-based software only • 7-day checkout	General Fund
Loaner Laptops	*	0	Non-reservable laptops with standard office and internet software	• Windows only • Not available at Children's Library	General Fund
Printing & Scanning	*	0	Computer and mobile printing, plus scanning services	• Charge per print	General Fund
eHelp	3	0	Help with library eResource apps and devices, including: • In-person • By phone • By email	• In-person appointments by weekdays only	General Fund
Tech Tutoring	0	2	Drop-in tech tutoring by volunteers	• Four 2-hour sessions per week • 2 locations	
Short Story Dispenser			Dispenses short stories	Traveling throughout the Palo Alto Unified School system	General Fund

* Requires multiple staff at all branches.

Occasional Technology Services

Service	Regular Staffing	Volunteer Staffing	Description	Status and Required Resources	Funding Source
Robo Dojo	1	2	Robot programing/coding workshop	• 1 robot • Raspberry Pi	Library Foundation
eResource Outreach	2	0	Various eResource outreach efforts including: • Pop-up Library • Senior Center eHelp • Public Event tabling		External partner
3D Design Coaching	1	1	Help with using 3D design software from a volunteer	• Summer only due to teen volunteer availability • 1 hour/week	General Fund
Virtual Reality	2	0	Public demonstrations and workshops around spatial computing technologies	• Not budgeted • No designated space • Min. 1 hour or room preparation	Library Foundation
Online Privacy and Security	1	0	Workshops and online resources to help the public improve their online privacy and security	• Held sparingly throughout the year • Requires ongoing staff commitment to	

				keep information up to date	
Technology Exhibits	4		Exhibits of emerging technologies to engage the public in important social and literacy issues	• Once per year • One location per exhibit	Grants
Sensory Storytime with Technology	2		Use of technologies like 'musical plants' and robots to support sensory storytimes	• Once per year	Grants

Appendix C

Case Study: 3D Printing

The service is quite popular, but remains limited due to:

- **Space**: 3D printers must be in a ventilated area nearby staff, making them inappropriate for LEED certified Mitchell Park Library (without new ventilation systems) or in printing rooms away from staff.
- **Supplies**: Buying supplies to enable printing has created a new demand on library supply budget. Currently only small objects are allowed.
- **Staffing**: 3D Printers require trained staff to monitor each job. These staff must know how the technology works, how to troubleshoot printing errors and to answer public questions. Like any technology, time is required to develop, monitor and adjust technology procedures and policies.

Case Study: Virtual Reality Programming

In 2016, the library purchased its first VR gear, promising to be one of the first libraries to offer VR services in the world. However, structural issues have limited our ability to integrate it into regular services.

- **R&D:** VR is a fast-developing technology that requires staff to keep abreast of new devices, platforms and applications. We are fortunate to have one such staff, but they are also involved in several other areas that pull them away. There is also demand for purchasing various devices for development new programs.
- **Space:** Without dedicated space, VR set up and take down time often takes as much time as the event itself.

Case Study: Meeting Room Equipment

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At library locations where public meeting rooms are made available, customers want to use their own laptops to project. Due to compatibility issue, the Library needs to install wireless screen projector solution.