PLP Innovation and Technology Opportunity Grant Program Application

1. One paragraph project summary.

Given the increasing number of digital services provided by libraries, helping customers virtually becomes more and more challenging. Many factors complicate troubleshooting via email and over the phone. Solving a problem usually requires identifying the customer's operating system, device details, browser type and version as well as the application where the problem is occurring. Libraries need a remote troubleshooting solution that can fully capture these details in real time with limited staff resources while making it simple and easy for our customers. This pilot project allows customers to receive improved help experiences using video calls using smart home devices. The Amazon Echo Show is a stand-alone smart home device with a 7-inch touchscreen display, powered by Amazon Alexa. Through our project, customers will be able to receive service from their own Alexa-powered device or from dedicated Amazon Echo Shows placed at each of our branches. The project will also explore other potential customer services uses of Amazon Alexa technology at the library and analyze customer opinions with using such technology.

2. Explain how this project fits with the library's strategic directions.

One of the goals of the Library's Strategic Plan for 2018-2021 is to "Leverage technology to integrate the library into the lives of community members." Within the goal, the Library promises to "Keep abreast of emerging technologies and trends and of library-specific applications." Amazon Echo Show gets excellent reviews by thousands of users, mainly for the ease of use and video chatting feature, since its launch in June 2017. It is a good candidate for providing remote eLibrary service to our customers.

3. A detailed description of the proposed project including the population served and the demographics of that population.

The project mainly has four components:
   1. Let customers use the Amazon Echo Show video calling feature to get help from the eLibrary anywhere.
   2. Evaluate customers' comfort level and record their feedback and concerns with the service.
   3. Experiment with using developer accounts to build "Alexa skills" to enable virtual customers to inquire about the library hours, events, collections or services using

Alexa-based applications/hardware from anywhere. This will be accomplished by using [Alexa Skills Kit](#) (ASK). ASK is a collection of self-service APIs, tools, documentation, and code samples that makes it fast and easy for people to develop skills for Alexa.

4. Develop understanding to leverage our learnings for future AI-related projects, such as AI programs for the public, and document these learnings for other libraries to use.

This project will mainly serve the following audience groups at the Library:

- Digital content users. Usually, this type of audience rarely visit a library in person.
- Customers transitioning to digital resources from physical library resources. Usually, this type of audience need more assistance with eResources.
- New customers who may need more assistance than experienced customers.

We will use the grant to purchase six Amazon Echo Show devices and set up Amazon Alexa developer accounts:

1. One Amazon Echo Show for staff use to answer customer video calls at eLibrary
2. The other five Shows will be distributed to five branches at the Library, so customers will be able to use them to call eLibrary help staff when they are physically present at the Library.

4. Goals and objectives of the project.

- Support remote video troubleshooting for customers' eResource related issues
- Provide virtual presence of eLibrary support across all five branches at the Library
- Develop training documentation on how to use Amazon Echo Show
- Explore potential ways to develop Alexa skills. We will develop a toolkit on this at the end of the project to share with other libraries.
- Develop a report to evaluate using Amazon Echo Show for customer service at the Library, including customer feedback, comfort level and privacy concerns based on questions asked during Alexa sessions.

5. Project timeline (activities).

Phase I: Show kiosk deployment
- Purchase six Amazon Echo Show devices
- Set up Amazon Echo Show and test run it at eLibrary
- Develop training documentation on Amazon Echo Show for staff
- Develop script for Show interactions, including set questions to gauge customer experiences with the sessions.
- Develop procedure to record customer usage and feedback on Amazon Echo Show
- Marketing and promotion on the new eLibrary help service
- Distribute the devices to all five branches

- Launch the new eLibrary Help service, and keep track of usage and feedback. The Library will place a link on the header of our site for customers to initiate an eLibrary Help session.

Phase II: Alexa Skills Deployment
- Set up Amazon Alexa developer accounts
- Develop Alexa skills for library hours, locations and events
- Develop procedures to record customer usage and feedback on the new "Ask Alexa" features
- Marketing and promotion on the new "Ask Alexa" features
- Launch the new "Ask Alexa" features, and keep track of usage and feedback.

Phase III: Wrap Up
- Analyze data
- Finalize documentation
- Write the final report

6. Evaluation of the project.

We will evaluate the project mainly by comparing the end results with the project goals and objectives:

We will report back on the following outcomes:
1. Customer comfort levels with using the Amazon Alexa Shows and Ask Alexa services
2. Comparison of customer satisfaction for a sample of standard eHelp sessions and Alexa Show sessions
3. Customer concerns around privacy using Shows and Alexa services
4. The number and duration of Show sessions
5. Analysis of the feasibility and complexity developing Alexa Skills by librarians
6. Recommendations for how Alexa Skills development can be used in public programs

7. Project budget. (Indirect costs are not allowed).

- Hardware: $779.94 + tax ($850)
  - Amazon Echo Shows: 6 X $129.99 = $779.94
- eLibrary Staff Backfill, developing Alexa skills: $4000 (100 hours @ $40/hour)

Total budget: $4,850

8. Sustainability analysis.

We feel that once deployed, the Echo Shows would be quite sustainable as a compliment to our existing help services. Similarly, the Alexa Skills experiment would align with our ongoing efforts to bring new technologies into public programing around artificial intelligence (AI).

The toolkits and documentation would allow other libraries to expand on our efforts to deploy their own Alexa Show services, develop new Alexa Skills and generally, incorporate AI concepts into public-facing projects, services and programs. In fact, we believe this would be an attractive candidate for state copycat grants.

All of the documentation and toolkits will be available using Creative Commons licensing to the public as well.